

③

SCIENTIFIC REFERENCE BR
Sci & Tech Inf Ctr

NOV 28 1997

Access DB# 244269

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Name: Sin J. Lee Examiner #: 76060 Date: 11-26-'07

Art Unit: 1795 Phone Number: 301 27333 Serial Number: 10/531,208

Mail Box and Bldg/Room Location: 9C15 Results Format Preferred (circle): PAPER DISK E-MAIL

(Rem.)

If more than one search is submitted, please prioritize searches in order of need.

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: P/z. See B.I.B.

Inventors (please provide full names): _____

Earliest Priority Filing Date: _____

**For Sequence Searches Only* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*

P/z. Search for the compound of formula (1)

of Cl. #24

Use form and instructions applicable



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BIBDATASHEET

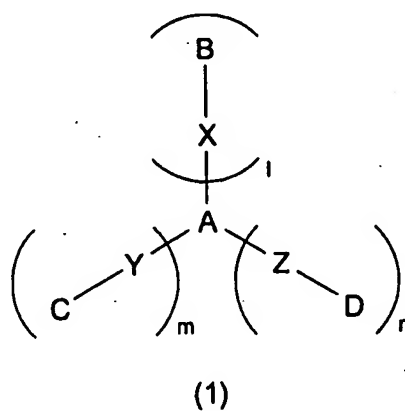
CONFIRMATION NO. 6424

Bib Data Sheet

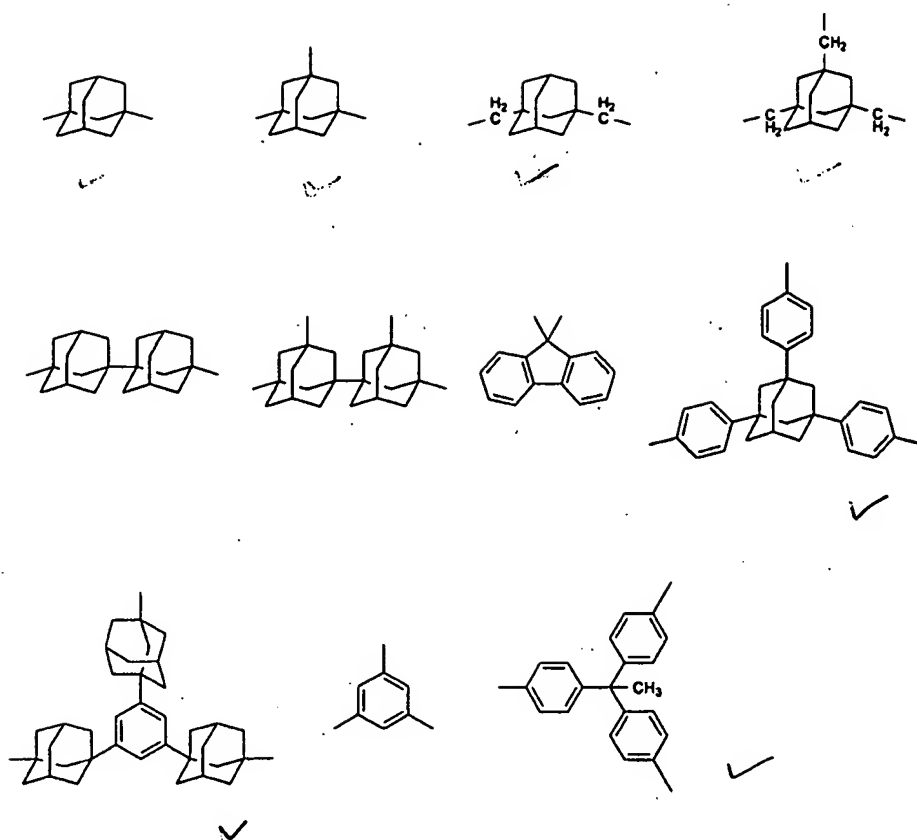
SERIAL NUMBER 10/531,208	FILING OR 371(c) DATE 04/14/2005 RULE	CLASS 430	GROUP ART UNIT 1756	ATTORNEY DOCKET NO. 28955.1048	
APPLICANTS Mitsuru Ueda, Tokyo, JAPAN; Hirotoshi Ishii, Chiba, JAPAN;					
** CONTINUING DATA ***** This application is a 371 of PCT/JP03/11137 09/01/2003					
** FOREIGN APPLICATIONS ***** JAPAN 2002300144 10/15/2002 JAPAN 2003112458 04/17/2003					
Foreign Priority claimed <input type="checkbox"/> yes <input type="checkbox"/> no 35 USC 119 (a-d) conditions <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> Met after met Allowance Verified and Acknowledged <u>Examiner's Signature</u> <u>Initials</u>		STATE OR COUNTRY JAPAN	SHEETS DRAWING	TOTAL CLAIMS 20	INDEPENDENT CLAIMS 3
ADDRESS 27890					
TITLE Photoresist base material, method for purification thereof, and photoresist compositions					
FILING FEE RECEIVED 900	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:		<input type="checkbox"/> All Fees <input type="checkbox"/> 1.16 Fees (Filing) <input type="checkbox"/> 1.17 Fees (Processing Ext. of time) <input type="checkbox"/> 1.18 Fees (Issue) <input type="checkbox"/> Other _____ <input type="checkbox"/> Credit		

is 4-(tert-butoxycarbonyloxy)benzyl or 3,5-di(tert-butoxycarbonyloxy)benzyl.

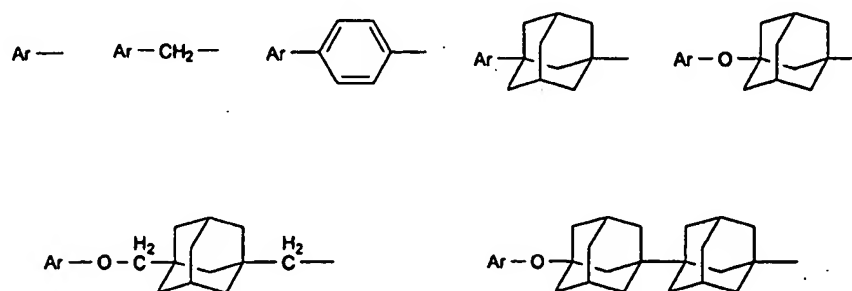
24. (New) A photoresist base material comprising an extreme ultra-violet reactive organic compound represented by the following general formula (1),



wherein A is an organic group selected from the group consisting of



wherein each of B, C and D is independently an extreme ultra-violet reactive group selected from the group consisting of



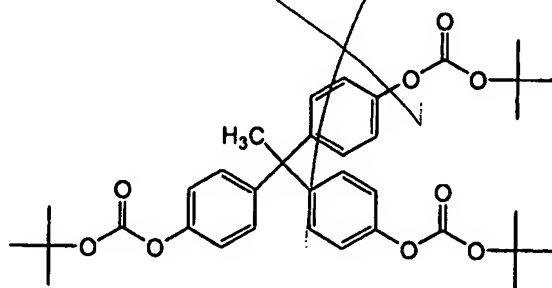
wherein Ar is a phenyl or naphthyl group substituted with RO- and/or ROCO- in

which R, RO- and ROCO are extreme ultra-violet reactive groups or groups having reactivity to the action of a chromophore active to extreme ultra-violet,

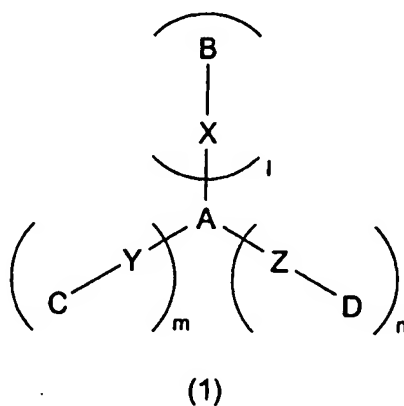
wherein each of X, Y and Z is independently a single bond or an ether bond, and

$l + m + n = 2, 3 \text{ or } 4$;

provided that excluded is the organic compound represented as follows

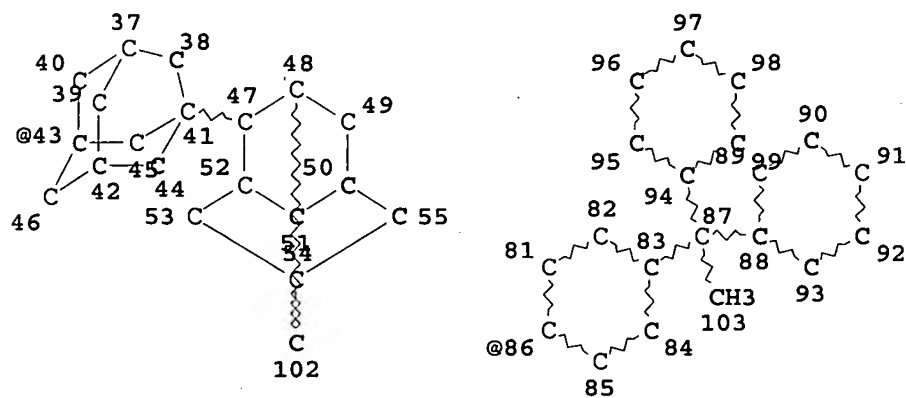
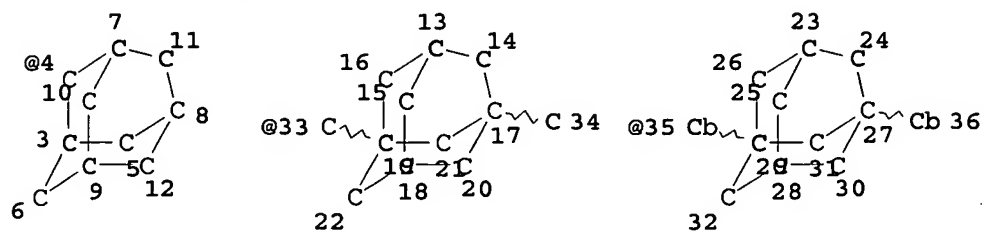


25. (New) A photoresist base material comprising an extreme ultra-violet reactive organic compound represented by the following general formula (1),



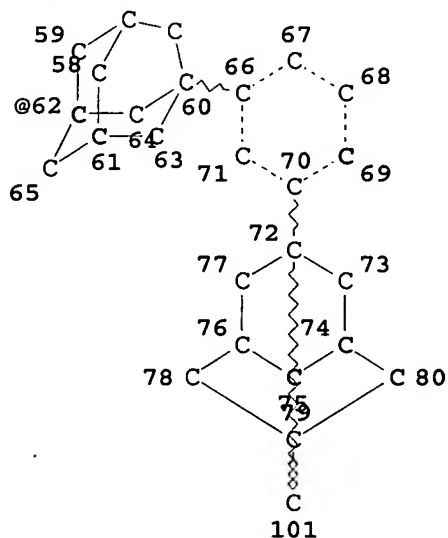
wherein A is an organic group represented by

L8	SCR 1992 OR 2021 OR 2016 OR 2026
L22	SCR 2043
L38	STR



G1 100 . 56 57

Page 1-A



Page 2-A
VAR G1=4/33/35/43/86/62
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DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

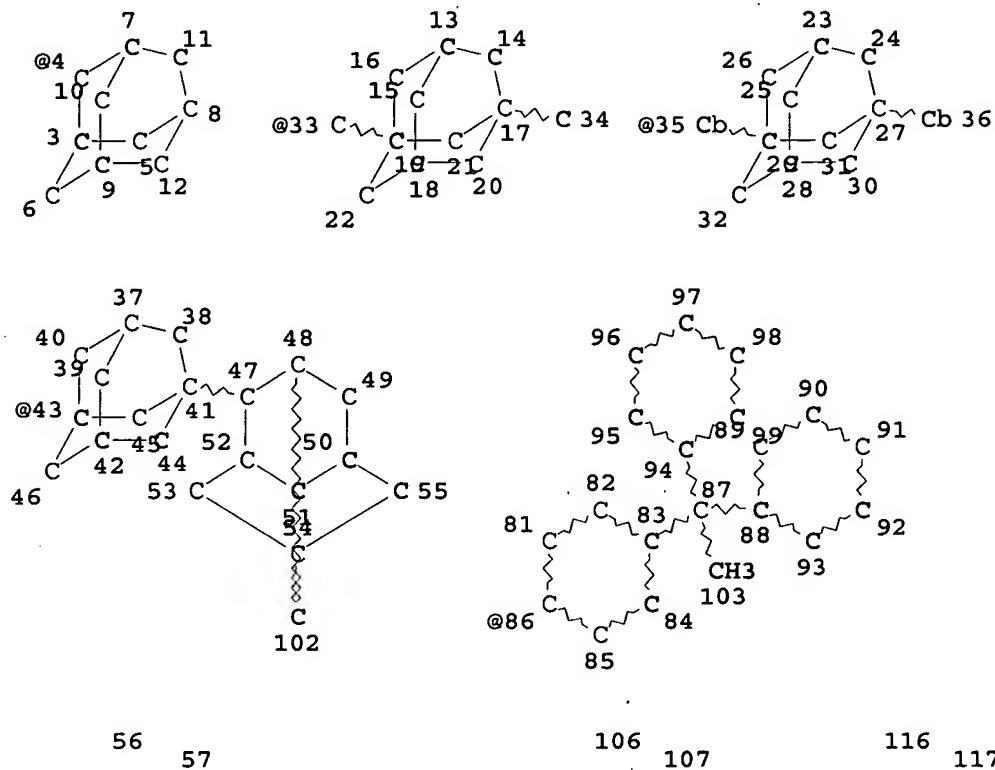
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NUMBER OF NODES IS 101

STEREO ATTRIBUTES: NONE

L42 16441 SEA FILE=REGISTRY SSS FUL L38 NOT (L8 OR L22)

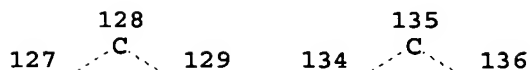
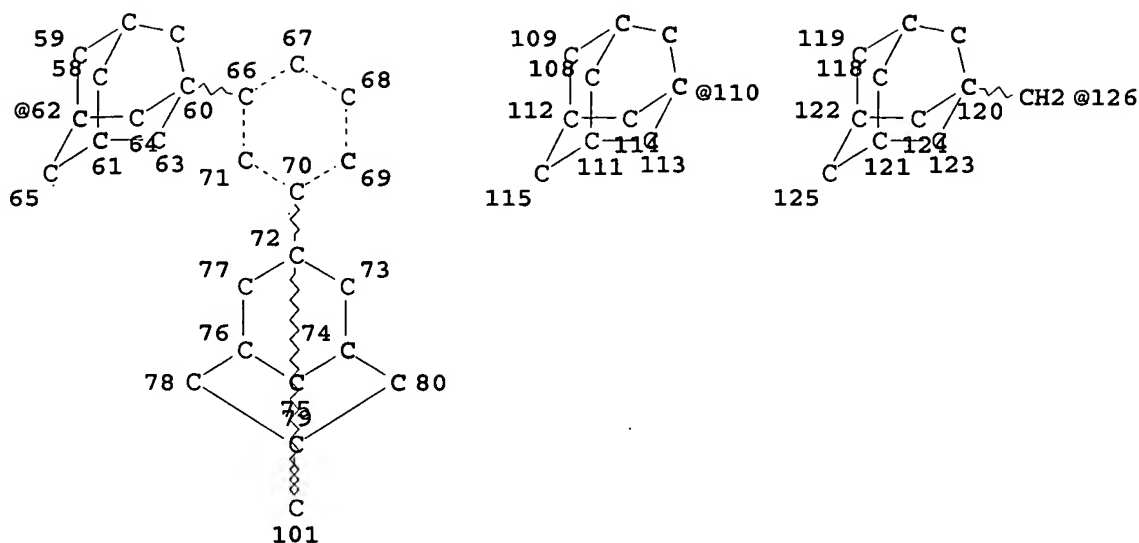
L52 STR



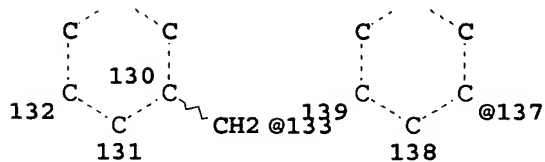
Page 1-A

5

Page 1-B



Page 2-A



Page 3-A

VAR G1=4/33/35/43/86/62

REP G2=(0-1) O

VAR G3=110/126/133/137

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 137

STEREO ATTRIBUTES: NONE

L54 744 SEA FILE=REGISTRY SUB=L42 SSS FUL L52

L56 426 SEA FILE=HCAPLUS ABB=ON PLU=ON L54

L58 30 SEA FILE=HCAPLUS ABB=ON PLU=ON L56 AND PHOTOG?/SC, SX

L59 55 SEA FILE=HCAPLUS ABB=ON PLU=ON L56 AND ?RESIST?

L60 66 SEA FILE=HCAPLUS ABB=ON PLU=ON L58 OR L59

L61 44 SEA FILE=HCAPLUS ABB=ON PLU=ON L60 AND (1840-2003)/PRY, AY, PY

=> sel hit rn 1-
E21 THROUGH E85 ASSIGNED

=> d 161 1-44 ibib ed abs hitstr hitind

L61 ANSWER 1 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:756675 HCAPLUS

DOCUMENT NUMBER: 141:243182

TITLE: Preparation of bis(3-amino-4-hydroxyphenyl)adamantane derivatives and process for production thereof

INVENTOR(S): Tanaka, Shinji; Ono, Hidetoshi; Kodoi, Kouichi; Hatakeyama, Naoyoshi

PATENT ASSIGNEE(S): Idemitsu Petrochemical Co., Ltd., Japan

SOURCE: PCT Int. Appl., 31 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

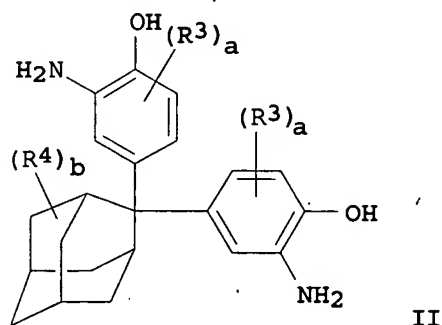
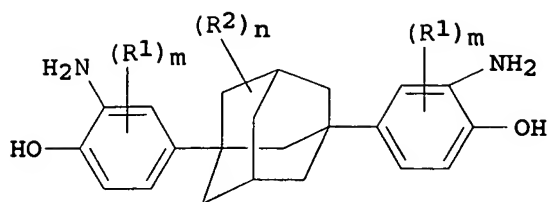
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004078701	A1	20040916	WO 2004-JP2280	20040226
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
JP 2004262889	A	20040924	JP 2003-56780	20030304
EP 1602641	A1	20051207	EP 2004-714876	20040226
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
US 2006161016	A1	20060720	US 2005-547553	20050901
PRIORITY APPLN. INFO.:				
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			WO 2004-JP2280	W 20040226

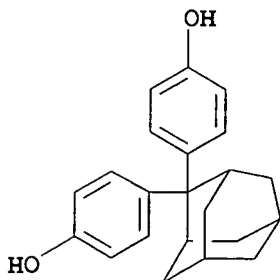
OTHER SOURCE(S): MARPAT 141:243182

ED Entered STN: 16 Sep 2004

GI



- AB The title adamantane derivs. represented by the general formulas (I) [R1 , R2 = halo, HO, C1-10 alkyl, C1-10 alkoxy, CO2H, C1-10 alkoxy carbonyl; m = 0-3; n = 0-14; when each m or n is a plural number, a plural number of R1 or R2 are same or different, but the case where R2 = Me is at the bridged position and m = 0 and n = 0 is excluded] and (II) [R3, R4 = halo, HO, C1-10 alkyl, CO2H, C1-10 alkoxy carbonyl; a = 0-3; b = 0-14; each a or b is a plural number, a plural number of R3 or R4 are same or different] are prepared by nitration of bis(4-hydroxyphenyl)adamantane and reduction of the resulting bis(4-hydroxy-3-nitrophenyl)adamantane derivs. These compds. provide novel materials which are excellent in heat **resistance**, mech. characteristics, elec. characteristics, phys. characteristics and so on and are useful as interlayer dielects. or protection films of semiconductor devices, interlayer dielects. of multilayer printed circuit boards, cover coats of flexible wiring boards, liquid crystal alignment layers, and so on (no data).
- IT 52211-74-2, 2,2-Bis(4-hydroxyphenyl)adamantane
(preparation of bis(3-amino-4-hydroxyphenyl)adamantane derivs. by nitration of bis(4-hydroxyphenyl)adamantane and reduction of bis(4-hydroxy-3-nitrophenyl)adamantane derivs.)
- RN 52211-74-2 HCAPLUS
- CN Phenol, 4,4'-tricyclo[3.3.1.1^{3,7}]decylidenebis- (CA INDEX NAME)



IC ICM C07C215-82
 ICS C07C213-02; C07C205-22; C07C201-08
 CC 25-10 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)
 IT 37677-93-3, 1,3-Bis(4-hydroxyphenyl)adamantane 52211-74-2,
 2,2-Bis(4-hydroxyphenyl)adamantane
 (preparation of bis(3-amino-4-hydroxyphenyl)adamantane derivs. by
 nitration of bis(4-hydroxyphenyl)adamantane and reduction of
 bis(4-hydroxy-3-nitrophenyl)adamantane derivs.)
 REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR
 THIS RECORD. ALL CITATIONS AVAILABLE IN THE
 RE FORMAT

L61 ANSWER 2 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 2004:534012 HCAPLUS
 DOCUMENT NUMBER: 141:90579
 TITLE: Perfluorostyrene compound, and coating solution
 and optical waveguide device using the compound
 INVENTOR(S): Kim, Ji-hyang; Kim, Jae-il; Kim, Tae-kyun; Lee,
 Hyung Jong; Han, Seon Gyu
 PATENT ASSIGNEE(S): Zen Photonics Co., Ltd., S. Korea
 SOURCE: U.S. Pat. Appl. Publ., 13 pp.
 CODEN: USXXCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004127632	A1	20040701	US 2003-616889	20030710
KR 2004006591	A	20040124	KR 2002-40901	20020712
US 2005163451	A1	20050728	US 2005-34646	20050113
US 7202324	B2	20070410		
US 2007173592	A1	20070726	US 2007-725398	20070319
PRIORITY APPLN. INFO.:			KR 2002-40901	A 20020712
			US 2003-616889	B1 20030710
			US 2005-34646	A3 20050113

OTHER SOURCE(S): MARPAT 141:90579

ED Entered STN: 02 Jul 2004

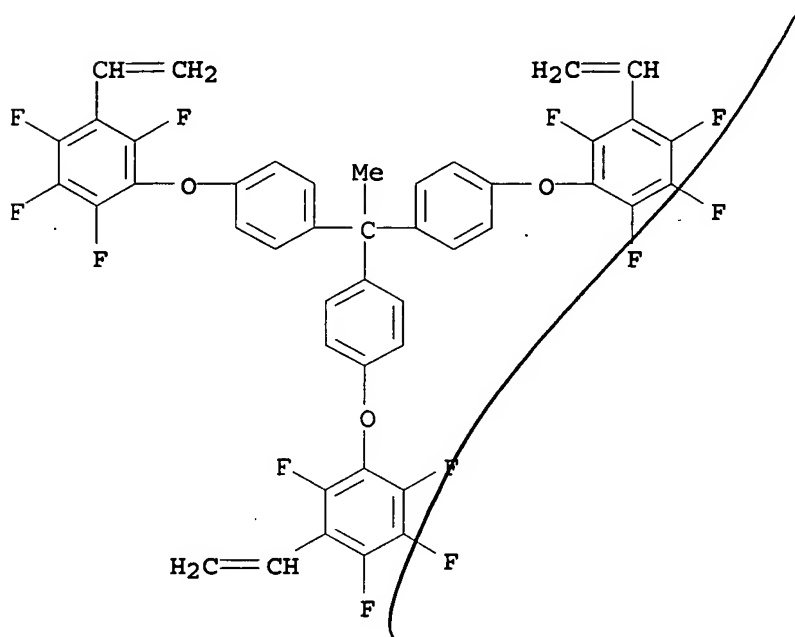
AB A F compound has perfluorostyrene introduced at a terminal end,
 characterized in that the introduction of perfluorostyrene results in
 a facile fabrication of thin films by a UV curing or a thermal curing,
 high thermal stability and chemical resistance, and low optical
 propagation loss and birefringence when applied to waveguides. The
 structure of the F compound is represented by
 $[CH_2:CHC_6F_4Z]_y R_f(ZArZR_f)_x[ZC_6F_4CH:CH_2]_{y'}$, where Z = O or S; R_f =
 aliphatic or aromatic group; y = 1-10, y' = 0-1; x = 0-200; Ar =
 MeC₆F₄RC₆F₄Me or C₆F₃MeX; R = direct single bond, CO, SO₂, S and O,
 and X = F, Cl, Br and I.

IT 713525-84-9P

(diluent preparation and copolymn.; perfluorostyrene-terminated
 photopolymerizable compound for core and cladding layers of optical
 waveguide device)

RN 713525-84-9 HCAPLUS

CN Benzene, 1,1',1''-ethyldynetris[4-(3-ethenyl-2,4,5,6-tetrafluorophenoxy)- (CA INDEX NAME)]



IC ICM C08L027-12

INCL 524544000; 526242000

CC 42-10 (Coatings, Inks, and Related Products)

Section cross-reference(s): 35, 73

IT 713525-84-9P

(diluent preparation and copolymn.; perfluorostyrene-terminated photopolymerizable compound for core and cladding layers of optical waveguide device)

L61 ANSWER 3 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:355223 HCAPLUS

DOCUMENT NUMBER: 140:383102

TITLE: **Photoresist** base material, method for purification thereof, and **photoresist** compositions containing the same

INVENTOR(S): Ueda, Mitsuru; Ishii, Hirotooshi

PATENT ASSIGNEE(S): Idemitsu Kosan Co., Ltd., Japan

SOURCE: PCT Int. Appl., 56 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004036315	A1	20040429	WO 2003-JP11137	20030901
WO 2004036315	B1	20040603		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI,

NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL,
SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA,
ZM, ZW

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,
BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE,
SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR,
NE, SN, TD, TG

JP 2004191913 A 20040708 JP 2003-112458 20030417

AU 2003261865 A1 20040504 AU 2003-261865 20030901

EP 1553451 A1 20050713 EP 2003-808872 20030901

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,
PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK

CN 1688939 A 20051026 CN 2003-824240 20030901

US 2005271971 A1 20051208 US 2005-531208 20050414

PRIORITY APPLN. INFO.:

JP 2002-300144 A 20021015

JP 2003-112458 A 20030417

WO 2003-JP11137 W 20030901

OTHER SOURCE(S): MARPAT 140:383102

ED Entered STN: 30 Apr 2004

AB The invention relates to **photoresist** base materials consisting of extreme UV sensitive-organic compds. represented by the general formula (B-X)_l(C-Y)_m(D-Z)_nA: [wherein A is a central structure consisting of an aliphatic group having C1-50, an aromatic group having C6-50 carbon, an organic group bearing both, or an organic group having a cyclic structure formed by repetition of these groups; B to D are each an extreme UV sensitive group, a group exhibiting a reactivity on the action of a chromophore sensitive to extreme UV rays, a C1-50 aliphatic or C6-50 aromatic group having such a group, an organic group having both groups, or a substituent having a branched structure; X to Z are each a single bond or an ether linkage; l to n are integers of 0-5 satisfying the relationship: $l + m + n \geq 1$; and A to D may each have a heteroatom-bearing substituent]. The invention provides **photoresist** base materials and **photoresist** compns. which enable ultrafine lithog. with extreme UV rays or the like and is suitable for use in semiconductor device fabrication.

IT 683227-75-0P 683227-76-1P

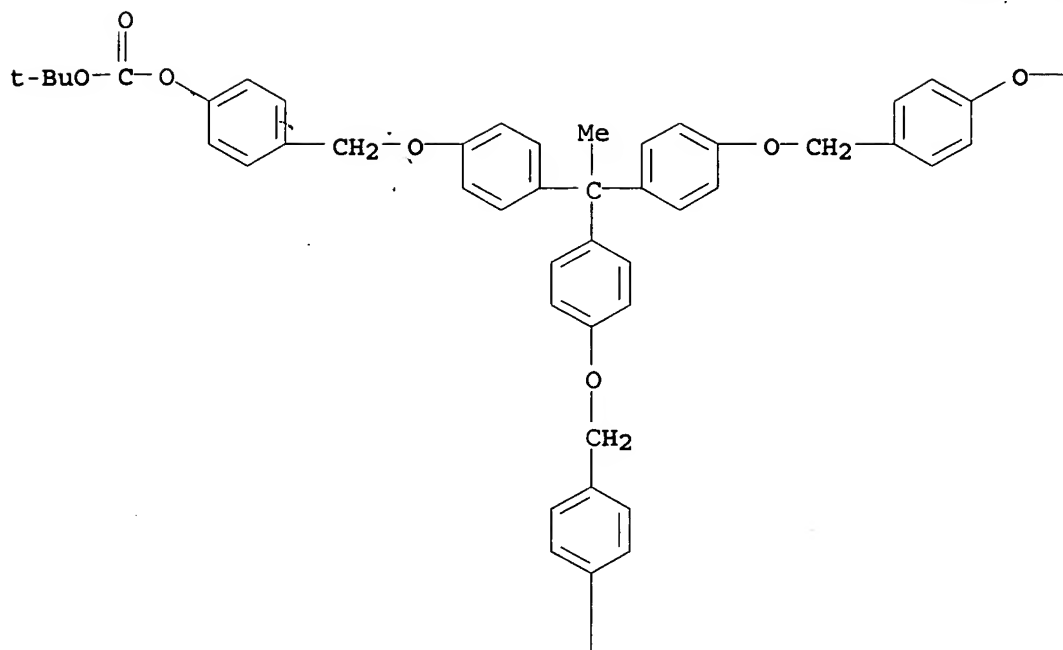
(**photoresist** base material, method for purification thereof, and **photoresist** compns. containing the same)

RN 683227-75-0 HCAPLUS

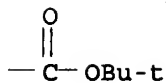
CN Carbonic acid, ethylidynetris(4,1-phenyleneoxymethylene-4,1-phenylene) tris(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)

Pres.

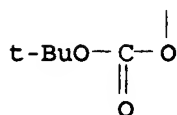
PAGE 1-A



PAGE 1-B

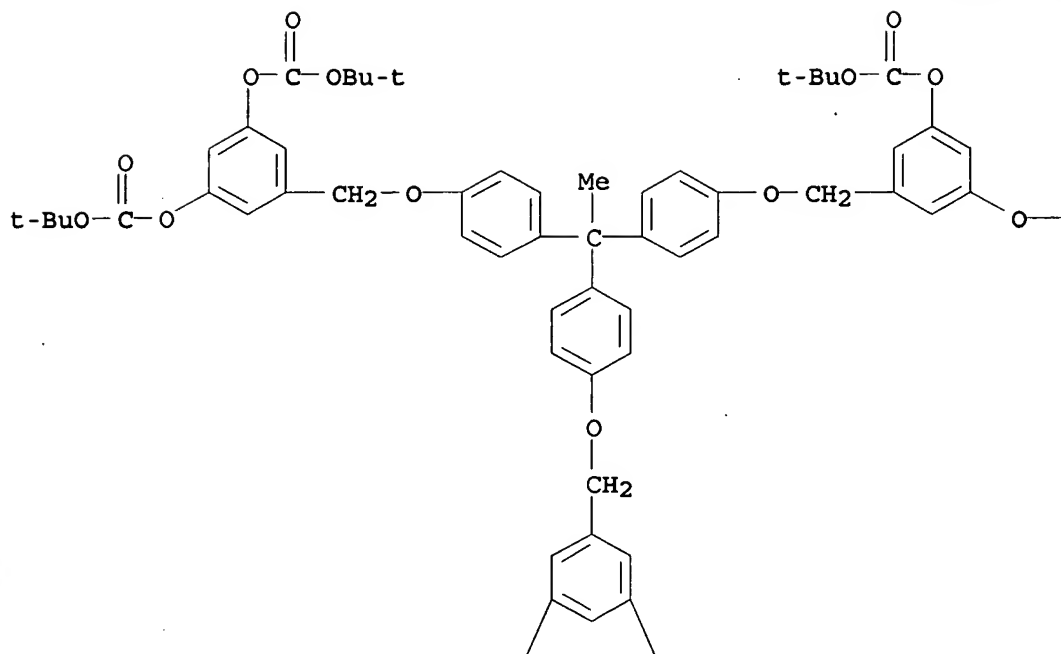


PAGE 2-A

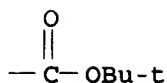


RN	683227-76-1	HCAPLUS
CN	Carbonic acid, ethylidynetris(4,1-phenyleneoxymethylene-5,1,3-benzenetriyl) hexakis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)	

PAGE 1-A



PAGE 1-B



PAGE 2-A



IC ICM G03F007-039
 ICS C07C039-17; C07C069-736; C07D309-04
 CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic**
 and Other Reprographic Processes)
 Section cross-reference(s): 76
 ST **photoresist** compn
 IT Light-sensitive materials
Photoresists
 Recrystallization
 Semiconductor device fabrication

(photoresist base material, method for purification thereof,
and photoresist compns. containing the same)

IT Distillation
(vacuum; photoresist base material, method for purification
thereof, and photoresist compns. containing the same)

IT 65338-98-9DP, tetrahydropyranyl and benzyl derivative ethers
125748-07-4P, Calix[4]resorcinarene 211427-64-4P 683227-72-7P
683227-73-8P 683227-74-9P 683227-75-0P
683227-76-1P
(photoresist base material, method for purification thereof,
and photoresist compns. containing the same)

IT 75-07-0, Acetaldehyde, reactions 108-46-3, Resorcinol, reactions
110-87-2, Dihydro-2H-pyran 623-05-2, 4-Hydroxybenzyl alcohol
1927-95-3, 4-Bromophenyl acetate 5001-18-3, 1,3-Dihydroxyadamantane
5292-43-3, tert-Butyl bromoacetate 24424-99-5, Di-tert-butyl
dicarbonate 27955-94-8 29654-55-5, 3,5-Dihydroxybenzylalcohol
99181-50-7, 1,3,5-Trihydroxyadamantane
(photoresist base material, method for purification thereof,
and photoresist compns. containing the same)

IT 156281-11-7P, 4-(tert-Butoxycarbonyloxy)benzylalcohol
(photoresist base material, method for purification thereof,
and photoresist compns. containing the same)

REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR
THIS RECORD. ALL CITATIONS AVAILABLE IN THE
RE FORMAT

L61 ANSWER 4 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:217149 HCAPLUS

DOCUMENT NUMBER: 140:278193

TITLE: Manufacture of amorphous polyphenols with good
heat resistance as electroluminescent
substances and hole transporters for organic
electroluminescent devices

INVENTOR(S): Fukuoka, Naohiko; Tagami, Sanae; Fujiwara, Toru;
Shionoya, Hidehiko

PATENT ASSIGNEE(S): Chemipro Kasei Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 62 pp.

CODEN: JXXXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

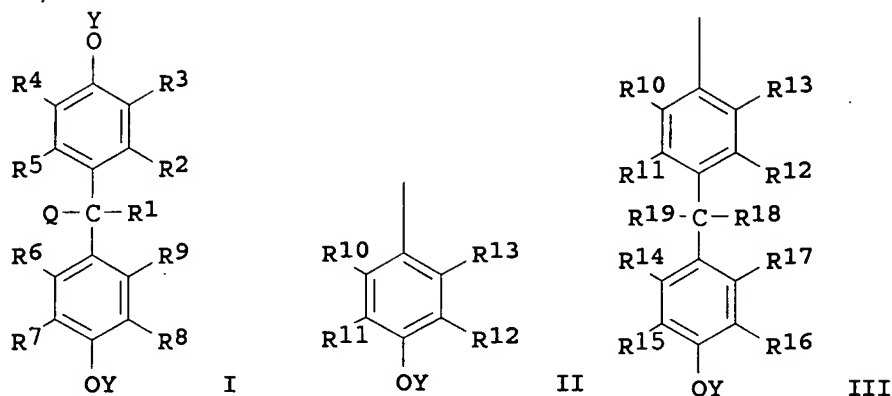
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004083444	A	20040318	JP 2002-244369	20020823

PRIORITY APPLN. INFO.:	JP 2002-244369	20020823
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OTHER SOURCE(S): MARPAT 140:278193

ED Entered STN: 18 Mar 2004

GI



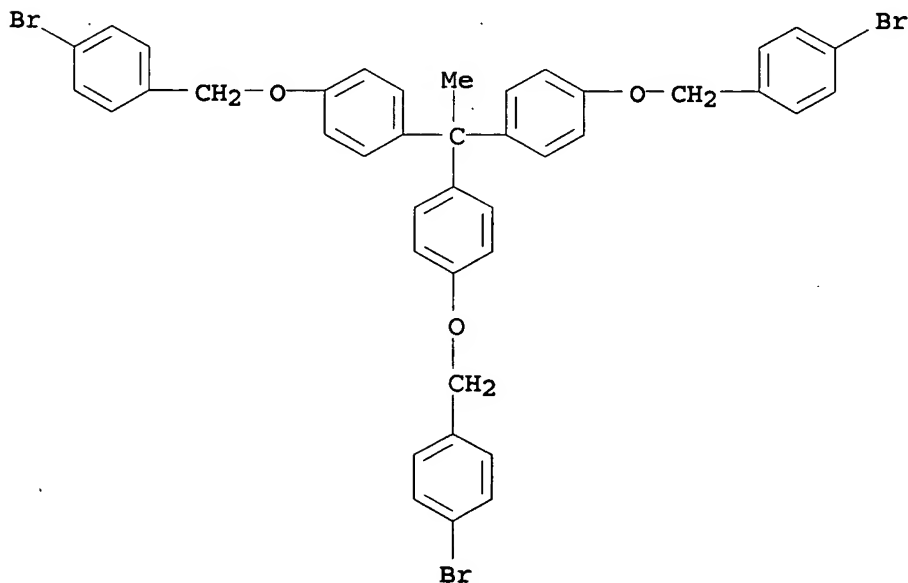
AB The polyphenols I [Q = II, III, etc.; R1, R18, R19 = H, (halo)alkyl, (alkyl)cycloalkyl, etc.; Y = CH₂Ar₁NAr₂Ar₃; R2-R17 = H, halo, (halo)alkyl, etc.; Ar₁ = arylene [substituted by halo, (cyclo)alkyl, aralkyl, etc.], Ar₂, Ar₃ = aryl [substituted by halo, (cyclo)alkyl, aralkyl, etc.]] are manufactured by treatment of I (Q = II, III, etc.; Y = H, R1-R19 = same as above) with Ar₂Ar₃NAr₁CH₂OH (Ar₁-Ar₃ = same as above), or treatment of I (Q = II, III, etc.; Y = CH₂Ar₁X; Ar₁ = same as above; X = halo) with HNAr₂Ar₃ (Ar₂, Ar₃ = same as above). Emitter or hole-transporting layers of the devices are effectively manufactured by solution casting of the polyphenols instead of vapor deposition.

IT 672288-94-7P

(manufacture of amorphous polyphenols as electroluminescent substances and hole transporters for organic electroluminescent devices)

RN 672288-94-7 HCAPLUS

CN Benzene, 1,1',1''-ethylidynetris[4-[(4-bromophenyl)methoxy]] - (CA INDEX NAME)



IC ICM C07C217-76
ICS C07C213-02; C07C213-06; C07D209-86; C09K011-06; H05B033-14;
H05B033-22

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 25

ST amorphous polyphenol manuf org electroluminescent device; hole transport polyphenol org electroluminescent device; methylfuorenylaminobenzyloxyphenyl ethane manuf org electroluminescent device; soln casting polyphenol org electroluminescent device; heat resistance polyphenol org electroluminescent device

IT 110726-28-8P 672288-94-7P 672288-95-8P
(manufacture of amorphous polyphenols as electroluminescent substances and hole transporters for organic electroluminescent devices)

L61 ANSWER 5 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:76525 HCAPLUS

DOCUMENT NUMBER: 140:129341

TITLE: Polyimides, polyamic acids, and interlayer insulation films using them with excellent adhesion and heat resistance and low specific inductive capacity

INVENTOR(S): Watanabe, Yasushi; Ueda, Mitsuru

PATENT ASSIGNEE(S): JSR Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004026850	A	20040129	JP 2002-152177	20020527
JP 3786051	B2	20060614		
PRIORITY APPLN. INFO.:			JP 2002-132334	A 20020508

ED Entered STN: 30 Jan 2004

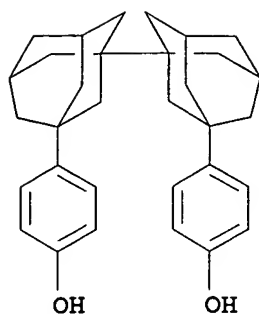
AB Polyamic acids having YNHCOX(CO₂H)₂CONH unit (X = 4-valent cyclic aliphatic group; Y = bivalent aromatic group having adamantane structure), the corresponding polyimides, and interlayer insulation films made of the polyimides are claimed. Thus, 1,3-bis[4-(4-aminophenoxy)phenyl]adamantane (preparation described) was treated with equimolar 1,2,3,4-cyclobutanetetracarboxylic dianhydride at 80° for 23 h in N-methylpyrrolidone to give 89% polyamic acid, which was heated to 70-300° to give a polyimide showing decomposition initiation temperature 387°, 5% weight loss temperature 464°, and sp. inductive capacity 2.78.

IT 16887-35-7P

(preparation and reaction with dinitrobenzene)

RN 16887-35-7 HCAPLUS

CN Phenol, 4,4'-[1,1'-bitricyclo[3.3.1.1.3,7]decane]-3,3'-diylbis- (CA INDEX NAME)



- IC ICM C08G073-10
ICS H01B003-30
- CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 24, 25, 76
- ST aminophenoxyphenyladamantane cyclobutanetetracarboxylic acid polyimide
insulation film; heat **resistance** polyimide
adamantanephenoxyaniline cyclobutanecarboxylic acid
- IT Polyethers, properties
(polyamic acid-; polyamic acids and polyimides with good heat
resistance and low sp. inductive capacity for interlayer
insulation films)
- IT Dielectric films
(polyamic acids and polyimides with good heat **resistance**
and low sp. inductive capacity for interlayer insulation films)
- IT Polyamic acids
(polyether-; polyamic acids and polyimides with good heat
resistance and low sp. inductive capacity for interlayer
insulation films)
- IT Polyimides, uses
(polyether-; polyamic acids and polyimides with good heat
resistance and low sp. inductive capacity for interlayer
insulation films)
- IT Polyethers, uses
(polyimide-; polyamic acids and polyimides with good heat
resistance and low sp. inductive capacity for interlayer
insulation films)
- IT 651024-87-2P 651025-05-7P 651025-18-2P
(polyamic acids and polyimides with good heat **resistance**
and low sp. inductive capacity for interlayer insulation films)
- IT 649757-15-3P 649757-16-4P 649757-17-5P 649757-18-6P
649757-19-7P 649757-21-1P 649757-22-2P
(polyamic acids and polyimides with good heat **resistance**
and low sp. inductive capacity for interlayer insulation films)
- IT 193422-31-0P, 1,3-Bis[4-(4-aminophenoxy)phenyl]adamantane
649757-20-0P
(polyamic acids and polyimides with good heat **resistance**
and low sp. inductive capacity for interlayer insulation films)
- IT 16887-35-7P
(preparation and reaction with dinitrobenzene)

L61 ANSWER 6 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:76452 HCAPLUS

DOCUMENT NUMBER: 140:128813

TITLE: Adamantane acrylate and its production method

INVENTOR(S): Tanaka, Shinji; Yoshidome, Toshihide; Ono,
Hidetoshi; Kodoi, Koichi; Hatakeyama, Naoyoshi

PATENT ASSIGNEE(S): Idemitsu Petrochemical Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

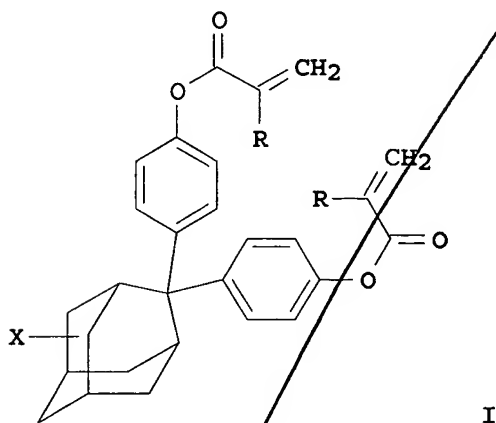
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004026700	A	20040129	JP 2002-184203	20020625

PRIORITY APPLN. INFO.:

JP 2002-184203	20020625
<--	
JP 2002-184203	20020625
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ED Entered STN: 30 Jan 2004

GI



AB The title compds. I (R = hydrogen C1-8 alkyl or fluoroalkyl; X = hydrogen, halogen, alkyl, OH, ether, acid, ester) are prepared from adamantylene diphenols and (meth)acryloyl halides. The compds. are useful as monomers for crosslinkable resins which have good optical properties such as transparency and heat resistance.

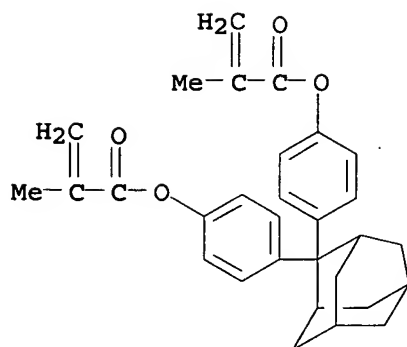
2,2-Adamantylene (4,1-phenylene)dimethacrylate was prepared from 4,4'-(2,2-adamantylene)diphenol and methacryloyl chloride.

IT 648857-90-3P 648857-91-4P 648857-92-5P

(adamantane acrylate and its production method)

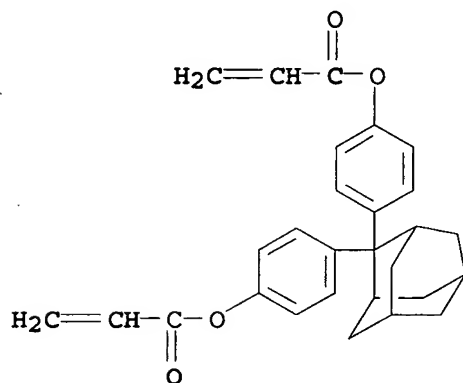
RN 648857-90-3 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, tricyclo[3.3.1.1^{3,7}]decylidenedi-4,1-phenylene ester (9CI) (CA INDEX NAME)



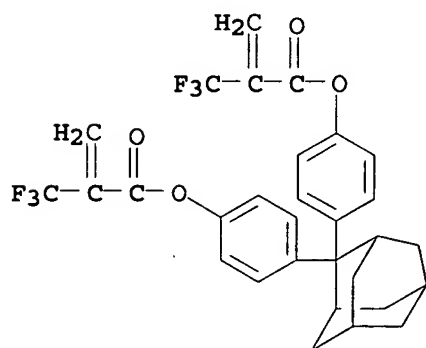
RN 648857-91-4 HCAPLUS

CN 2-Propenoic acid, tricyclo[3.3.1.1.3,7]decylidenedi-4,1-phenylene ester
(9CI) (CA INDEX NAME)



RN 648857-92-5 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, tricyclo[3.3.1.1.3,7]decylidene
di-4,1-phenylene ester (9CI) (CA INDEX NAME)

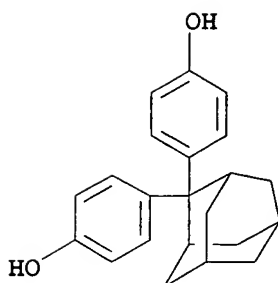


IT 52211-74-2

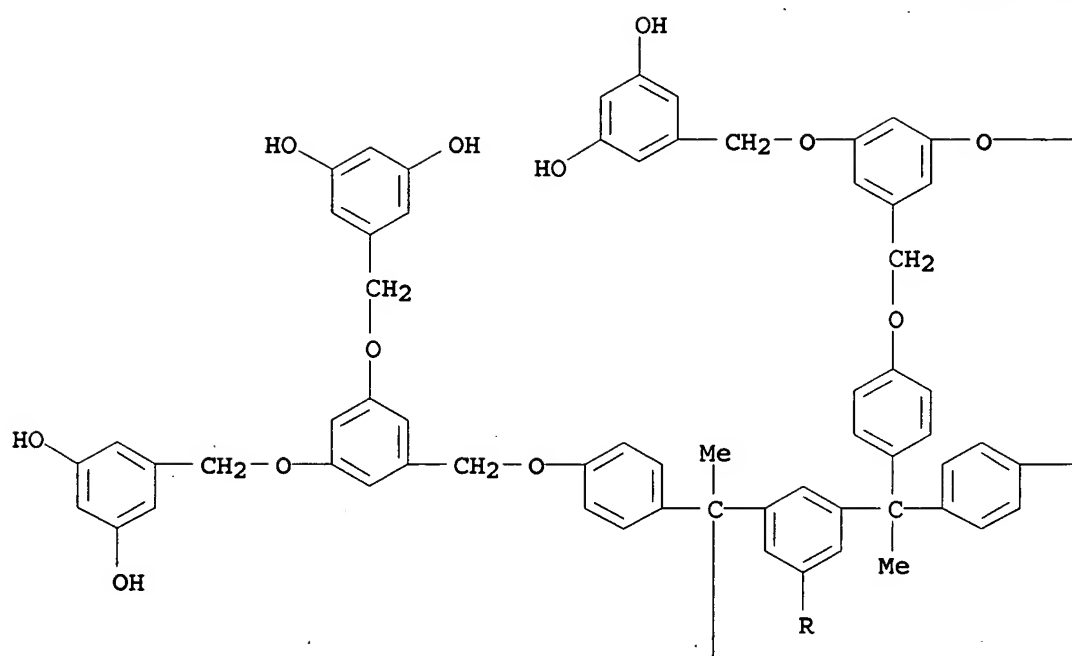
(adamantane acrylate and its production method)

RN 52211-74-2 HCAPLUS

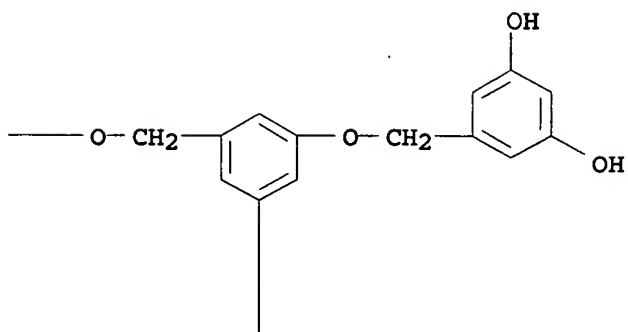
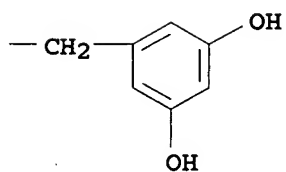
CN Phenol, 4,4'-tricyclo[3.3.1.1.3,7]decylidenebis- (CA INDEX NAME)



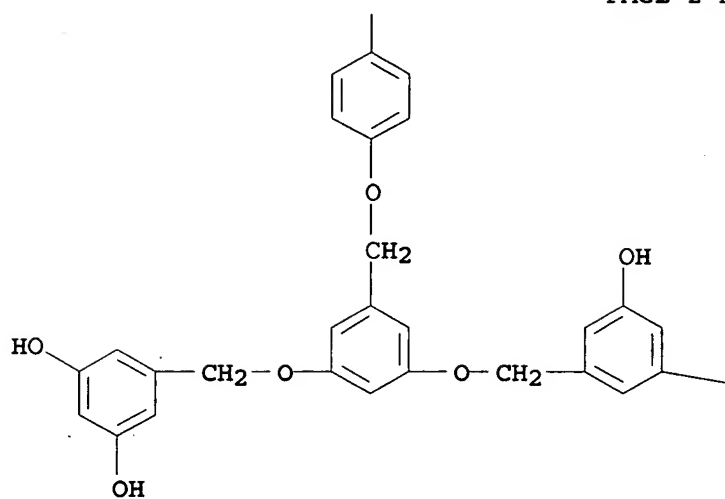
PAGE 1-A



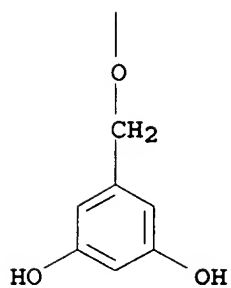
PAGE 1-B



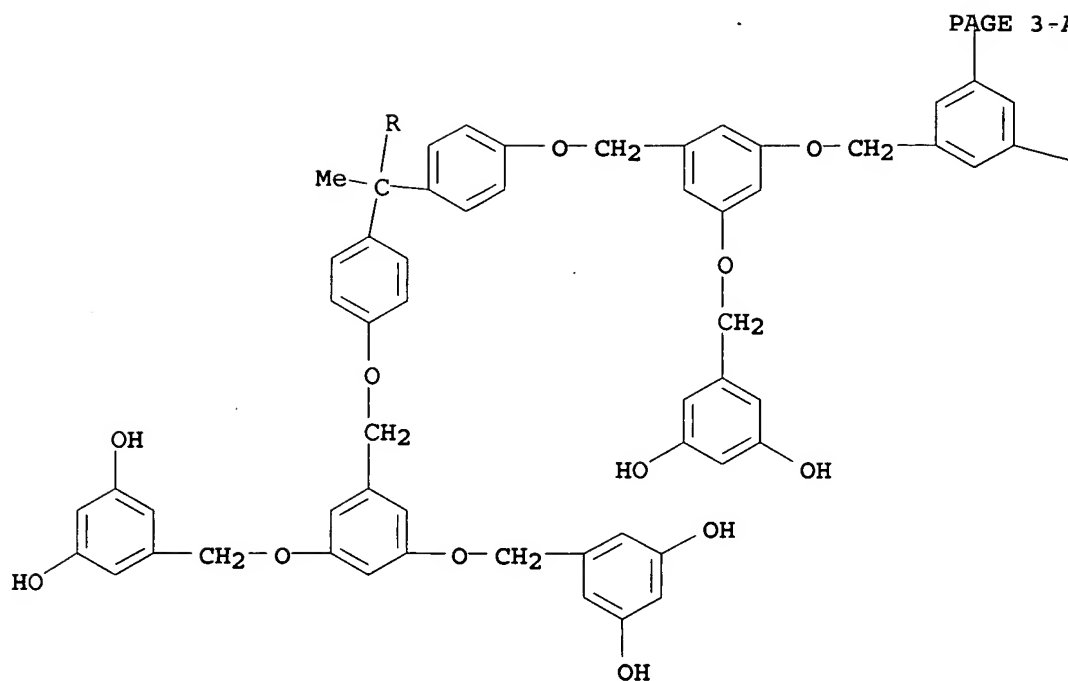
PAGE 2-A



PAGE 2-B



PAGE 3-A



PAGE 3-B

—OH

- IC ICM G03F007-038
ICS C08G065-34; H01L021-027; H01L021-30
- CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic**
and Other Reprographic Processes)
Section cross-reference(s): 25
- ST amplified neg **resist** dendritic polyether binder; development
defect prevention neg electron beam **resist**
- IT Crosslinking agents
(chemical amplified neg. **resists** containing alkali-soluble
dendritic binder resins forming defect-free square patterns)
- IT Electron beam **resists**
(neg.-working; chemical amplified neg. **resists** containing
alkali-soluble dendritic binder resins forming defect-free square
patterns)
- IT 153698-46-5P, Triphenylsulfonium pentafluorobenzenesulfonate
258341-98-9P, Di(4-tert-amylphenyl)iodonium
pentafluorobenzenesulfonate 270564-02-8P, Tetramethylammonium
pentafluorobenzenesulfonate
(acid generators; chemical amplified neg. **resists** containing
alkali-soluble dendritic binder resins forming defect-free square
patterns)
- IT 640276-95-5P 640276-96-6P 640276-97-7P 640276-98-8P
(alkali-soluble binders; chemical amplified neg. **resists** containing

alkali-soluble dendritic binder resins forming defect-free square patterns)

IT 640276-94-4P
(chemical amplified neg. **resists** containing alkali-soluble dendritic binder resins forming defect-free square patterns)

IT 2150-44-9, Methyl 3,5-dihydroxybenzoate 110726-28-8, Trisp PA 182250-70-0
(chemical amplified neg. **resists** containing alkali-soluble dendritic binder resins forming defect-free square patterns)

IT 161679-94-3P 161679-95-4P 161679-98-7P 162846-57-3P
185502-11-8P 185502-14-1P 185502-15-2P 197087-73-3P
197087-74-4P
(crosslinking agents; chemical amplified neg. **resists** containing alkali-soluble dendritic binder resins forming defect-free square patterns)

L61 ANSWER 8 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2003:889841 HCAPLUS

DOCUMENT NUMBER: 139:365992

TITLE: Alicyclic copolymers having low refractive index for optical transmission fibers and their preparation

INVENTOR(S): Nishikubo, Tadaomi; Kudo, Hiroto

PATENT ASSIGNEE(S): JSR Ltd., Japan; Kanagawa University

SOURCE: Jpn. Kokai Tokkyo Koho, 15 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

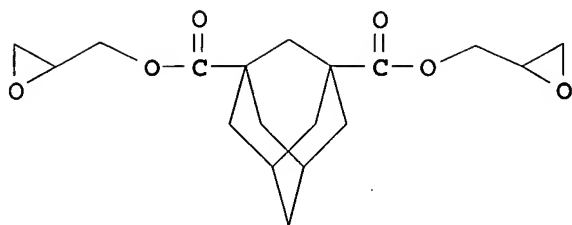
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

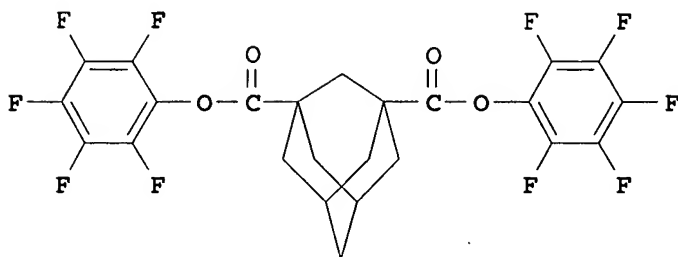
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2003321530	A	20031114	JP 2002-129734	20020501
			<--	
JP 3889990	B2	20070307		
PRIORITY APPLN. INFO.:			JP 2002-129734	20020501
			<--	

ED Entered STN: 14 Nov 2003

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II

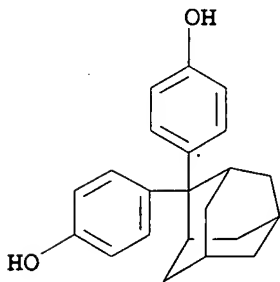
AB Copolymers (of Mn 2,000-300,000) prepared by polycondensation of alicyclic diepoxides $\text{Cy}(\text{CO}_2\text{G})_2$ and/or $\text{Cy}(\text{R}_1\text{OG})_2$ and $\text{Cy}(\text{CO}_2\text{R}_2)_2$ and/or $\text{Cy}(\text{R}_1\text{OH})_2$ [Cy = C3-10 bivalent alicyclic hydrocarbon; R₁ = C6-12 (fluoro)arylene; R₂ = H, C1-5 (fluoro)alkyl, (fluoro)phenyl; G = glycidyl], and resins for optical transmission fibers containing the copolymers are sep. claimed. The polycondensation may be carried out in the presence of quaternary onium salts, tertiary amines, and/or tertiary phosphines. Thus, equimolar I was copolymd. with II in the presence of Bu₄PCl and recrystd. to give a polymer of Mn 12,700 and polydispersity 2.53.

IT 52211-74-2P 56323-07-0P 620990-08-1P

(heat-resistant low-n adamantylene-containing copolymers for optical transmission fibers)

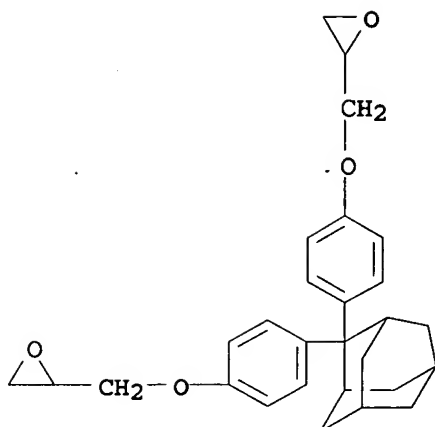
RN 52211-74-2 HCAPLUS

CN Phenol, 4,4'-tricyclo[3.3.1.3^{1,7}]decylidenebis- (CA INDEX NAME)

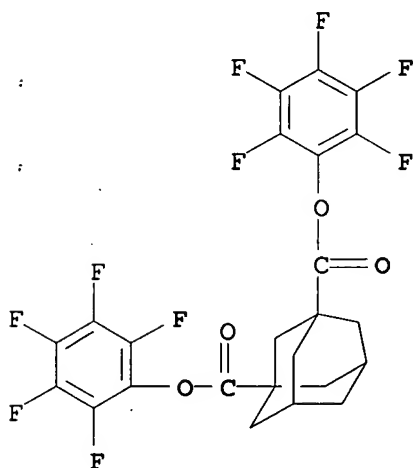


RN 56323-07-0 HCAPLUS

CN Oxirane, 2,2'-[tricyclo[3.3.1.3^{1,7}]decylidenebis(4,1-phenyleneoxymethylene)]bis- (CA INDEX NAME)



RN 620990-08-1 HCAPLUS
 CN Tricyclo[3.3.1.13,7]decane-1,3-dicarboxylic acid,
 bis(pentafluorophenyl) ester (9CI) (CA INDEX NAME)



IC ICM C08G059-24
 ICS C08G059-42; C08G059-62; G02B001-04; G02B006-00; G02B006-12
 CC 38-3 (Plastics Fabrication and Uses)
 Section cross-reference(s): 73
 IT Optical fibers
 Polymerization catalysts
 (heat-resistant low-n adamantylene-containing copolymers for
 optical transmission fibers)
 IT Polyethers, uses
 (polyester-, cardo, fluorine-containing; heat-resistant low-n
 adamantylene-containing copolymers for optical transmission fibers)
 IT Polyethers, uses
 (polyester-, fluorine-containing; heat-resistant low-n
 adamantylene-containing copolymers for optical transmission fibers)
 IT Fluoropolymers, uses
 (polyester-polyether-; heat-resistant low-n
 adamantylene-containing copolymers for optical transmission fibers)
 IT Cardo polymers

- (polyester-polyethers, fluorine-containing; heat-resistant low-n adamantylene-containing copolymers for optical transmission fibers)
- IT Polyesters, uses
(polyether-, cardo, fluorine-containing; heat-resistant low-n adamantylene-containing copolymers for optical transmission fibers)
- IT Polyesters, uses
(polyether-, fluorine-containing; heat-resistant low-n adamantylene-containing copolymers for optical transmission fibers)
- IT Onium compounds
(quaternary, polymerization catalysts; heat-resistant low-n adamantylene-containing copolymers for optical transmission fibers)
- IT Amines, uses
Phosphines
(tertiary, polymerization catalysts; heat-resistant low-n adamantylene-containing copolymers for optical transmission fibers)
- IT 1112-67-0, Tetrabutylammonium chloride 1643-19-2, Tetrabutylammonium bromide 2001-45-8, Tetraphenylphosphonium chloride 2304-30-5, Tetrabutylphosphonium chloride 2751-90-8, Tetraphenylphosphonium bromide 3115-68-2, Tetrabutylphosphonium bromide
(heat-resistant low-n adamantylene-containing copolymers for optical transmission fibers)
- IT 37677-93-3P, 1,3-Bis(4-hydroxyphenyl)adamantane 52211-74-2P 56323-07-0P 252554-10-2P 620990-07-0P 620990-08-1P
(heat-resistant low-n adamantylene-containing copolymers for optical transmission fibers)
- IT 620990-09-2P 620990-10-5P 620990-11-6P 620990-12-7P 620990-13-8P 620990-14-9P 620990-15-0P
(heat-resistant low-n adamantylene-containing copolymers for optical transmission fibers)
- IT 108-95-2, Phenol, reactions 700-58-3, 2-Adamantanone 771-61-9, Pentafluorophenol 876-53-9, 1,3-Dibromoadamantane 3132-64-7, Epibromohydrin 39269-10-8, 1,3-Adamantanedicarboxylic acid
(heat-resistant low-n adamantylene-containing copolymers for optical transmission fibers)

L61 ANSWER 9 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2003:652128 HCAPLUS

DOCUMENT NUMBER: 139:198228

TITLE: Hydroxyphenyl adamantanes, and their production, for heat-resistant resins

INVENTOR(S): Furukawa, Akira; Egawa, Kenji; Watanabe, Kentaro; Yao, Kazuhiko; Ishitani, Miwa

PATENT ASSIGNEE(S): Honshu Chemical Industry Co., Ltd., Japan

SOURCE: Eur. Pat. Appl., 21 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

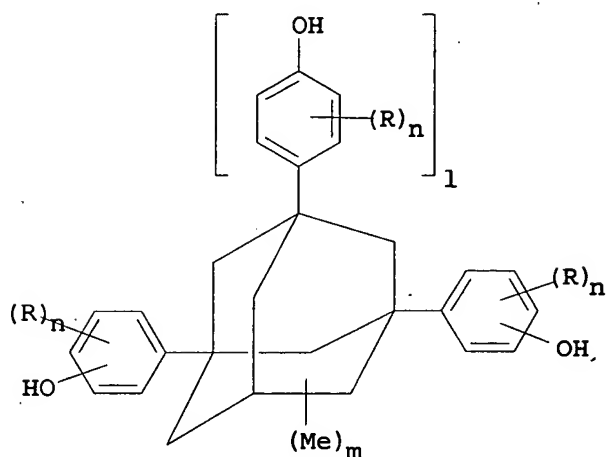
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1336597	A1	20030820	EP 2003-3477	20030214
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JP 2003306460	A	20031028	JP 2002-376246	20021226
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JP 2003306461	A	20031028	JP 2003-4245	20030110

US 2003187307	A1	20031002	US 2003-361484	20030207
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US 6720460	B2	20040413		
PRIORITY APPLN. INFO.:			JP 2002-38190	A 20020215
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			JP 2002-38192	A 20020215
			<--	
			JP 2002-376246	A 20021226
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			JP 2003-4245	A 20030110
			<--	

OTHER SOURCE(S): MARPAT 139:198228
 ED Entered STN: 21 Aug 2003
 GI



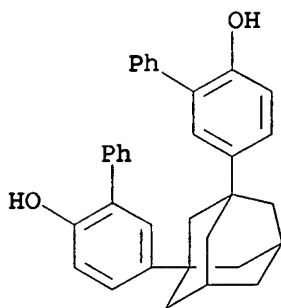
I

AB Hydroxyphenyl adamantanes have structure I, where R = alkyl, cycloalkyl or Ph group; m = 0 or 1 or 2; l = 0 or 1; provided when l = 1, hydroxy groups of substituted hydroxyphenyl groups at positions 1 and 3 are together in para-position; n = 0 or 1, 2 or 3; and when l = 0, n = 1, 2 or 3. Thus, the reaction of 8.39 mol 2,6-dimethylphenol with 1.05 mol 1,3-adamantane-diol in the presence of p-MeC6H4SO3H monohydrate at 90° gave crude 1,3-Bis(3,5-dimethyl-4-hydroxyphenyl)adamantane (recryst. m.p. 189°).

IT 582311-11-3P 582311-18-0P
 (in manufacture of hydroxyphenyl adamantane precursor for heat-resistant resins)

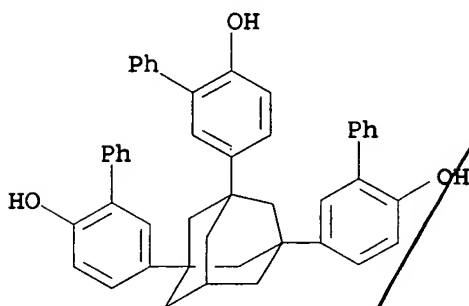
RN 582311-11-3 HCAPLUS

CN [1,1'-Biphenyl]-2-ol, 5,5''-tricyclo[3.3.1.13,7]decane-1,3-diylbis-(9CI) (CA INDEX NAME)



RN 582311-18-0 HCAPLUS

CN [1,1'-Biphenyl]-2-ol, 5,5'',5'''-tricyclo[3.3.1.3,7]decane-1,3,5-triyltris- (9CI) (CA INDEX NAME)



IC ICM C07C039-17

ICS C07C037-16

CC 37-2 (Plastics Manufacture and Processing)

Section cross-reference(s): 25

ST hydroxyphenyl adamantane bisphenol trisphenol prepn; heat resistant resin hydroxyphenyl adamantane monomer

IT Heat-resistant materials

(manufacture of hydroxyphenyl adamantane precursor for heat-resistant resins)

IT 566885-10-7P 582311-10-2P 582311-11-3P 582311-12-4P

582311-13-5P 582311-14-6P 582311-15-7P 582311-16-8P

582311-17-9P 582311-18-0P

(in manufacture of hydroxyphenyl adamantane precursor for heat-resistant resins)

IT 90-43-7, o-Phenylphenol 95-48-7, 2-Methylphenol, reactions

108-39-4, 3-Methylphenol, reactions 108-95-2, Phenol, reactions

119-42-6, o-Cyclohexylphenol 576-26-1, 2,6-Dimethylphenol

1596-13-0, 2-Cyclohexyl-5-methylphenol

(reaction with adamantane bisphenol or trisphenol; in manufacture of hydroxyphenyl adamantane precursor for heat-resistant resins)

IT 5001-18-3, 1,3-Adamantanediol 99181-50-7, 1,3,5-Adamantanetriol

(reaction with substituted phenol; in manufacture of hydroxyphenyl adamantane precursor for heat-resistant resins)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L61 ANSWER 10 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 2003:633402 HCAPLUS
 DOCUMENT NUMBER: 139:180065
 TITLE: Preparation of 1,2,4-triazole derivatives as
 11 β -hydroxysteroid dehydrogenase 1 inhibitors
 useful for the treatment of diabetes, obesity and
 dyslipidemia
 INVENTOR(S): Balkovec, James M.; Thieringer, Rolf; Mundt,
 Steven S.; Hermanowski-Vosatka, Anne; Graham,
 Donald W.; Patel, Gool F.; Aster, Susan D.;
 Waddell, Sherman T.; Olson, Steven H.; Maletic,
 Milana
 PATENT ASSIGNEE(S): Merck & Co., Inc., USA
 SOURCE: PCT Int. Appl., 119 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003065983	A2	20030814	WO 2003-US2558	20030128

WO 2003065983 A3 20031127

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH,
 CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD,
 GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC,
 LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO,
 NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM,
 TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,
 BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
 EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI,
 SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,
 SN, TD, TG

CA 2474168	A1	20030814	CA 2003-2474168	20030128
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AU 2003207717	A1	20030902	AU 2003-207717	20030128
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EP 1474139	A2	20041110	EP 2003-705952	20030128
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EP 1474139 B1 20071121

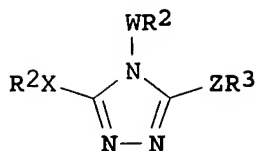
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 PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK
 JP 2005525326 T 20050825 JP 2003-565409 20030128

US 2005070720	A1	20050331	US 2004-502967	20040729
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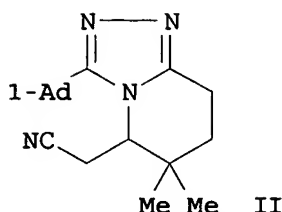
PRIORITY APPLN. INFO.:	US 2002-353592P	P	20020201
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WO 2003-US2558	W	20030128
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OTHER SOURCE(S): MARPAT 139:180065
 ED Entered STN: 15 Aug 2003
 GI



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II

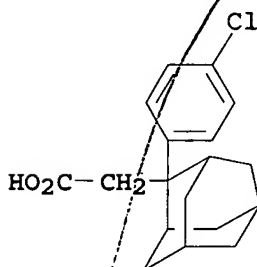
AB Triazoles I [R1 = (un)substituted adamantyl; W = (un)substituted NH, bond; X = CH2, bond; Z = S, bond; R2 = H, (un)substituted alkyl, alkenyl, CH2CO2H, cycloalkyl, bicycloalkyl, adamantyl; R3 = H, (un)substituted alkyl, alkenyl] were prepared. They inhibit the 11 β -HSD1-mediated conversion of cortisone and other 11-keto-glucocorticoids to cortisol and other 11 β -hydroxy-glucocorticoids (no data). The 11 β -HSD1 inhibitors therefore decrease the amount of cortisol in target tissues, thereby modulating the effects of cortisol. Modulation of cortisol may be effective in controlling non-insulin-dependent diabetes (NIDDM), hyperglycemia, obesity, insulin resistance, dyslipidemia, hyperlipidemia, hypertension, Syndrome X, and other symptoms associated with NIDDM or with excess cortisol in the body. Thus, the triazole II was prepared by treating 1-adamantanecarbonylhydrazine with 2-methoxy-5,5-dimethyl-3,4,5,6-tetrahydropyridine-6-acetonitrile.

IT 400081-88-1

(preparation of 1,2,4-triazole derivs. as 11 β -hydroxysteroid dehydrogenase 1 inhibitors)

RN 400081-88-1 HCAPLUS

CN Tricyclo[3.3.1.1.3,7]decane-2-acetic acid, 2-(4-chlorophenyl)- (CA INDEX NAME)



IC ICM A61K

CC 28-10 (Heterocyclic Compounds (More Than One Hetero Atom))

Section cross-reference(s): 1

IT 75-36-5, Acetyl chloride 79-03-8, Propionyl chloride 98-88-4, Benzoyl chloride 110-58-7, 1-Aminopentane 111-26-2, 1-Aminohexane 141-75-3, Butyryl chloride 638-29-9, Valeryl chloride 700-57-2, 2-Adamantanol 753-90-2, 2,2,2-Trifluoroethylamine 765-30-0, Cyclopropylamine 878-13-7, Cycloundecanone 941-37-7, 1-Bromo-3,5-dimethyladamantane 1196-38-9 1453-50-5, N-Cyclopropylcyclopropanecarboxamide 1502-06-3, Cyclodecanone 1889-06-1 2094-72-6, 1-Adamantanecarbonyl chloride 2094-73-7, Ethyl 1-adamantanecarboxylate 2525-16-8, 1-Aza-2-methoxy-1-cycloheptene 3350-30-9, Cyclononanone 3768-43-2 4238-69-1

4775-98-8 4942-47-6, 1-Adamantaneacetic acid 5351-69-9,
 4-Phenylthiosemicarbazide 7149-39-5 13431-36-2 15291-66-4,
 3,5,7-Trimethyladamantane-1-carboxylic acid 18761-61-0 19026-80-3
 19748-88-0 21816-08-0, 3-Bromo-1-adamantanecarboxylic acid
 22245-95-0 24056-65-3 32741-89-2 32806-53-4 39094-32-1
 41216-03-9 41216-04-0 41419-25-4 42711-75-1,
 3-Hydroxyadamantane-1-carboxylic acid 50549-20-7 51551-56-5
 55186-89-5 65113-02-2 71058-32-7 81976-72-9 81976-73-0
 83090-60-2 87922-77-8 87922-78-9 96860-19-4 120484-70-0
 139158-24-0 139158-25-1 139158-26-2 146059-76-9 151017-99-1
 151672-39-8 179686-06-7 195073-93-9 201992-25-8 256954-82-2
 400081-88-1 412027-54-4 581787-32-8 581787-33-9
 581787-34-0 581787-35-1 581787-36-2 581787-37-3 581787-38-4
 581787-39-5 581787-40-8

(preparation of 1,2,4-triazole derivs. as 11 β -hydroxysteroid
 dehydrogenase 1 inhibitors)

L61 ANSWER 11 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2003:137289 HCAPLUS

DOCUMENT NUMBER: 139:14797

TITLE: Synthesis of novel thermally reversible
 photochromic spiro[adamantane-2,7' (6'H)-
 benzothiophene]

AUTHOR(S): Yokoyama, Yasushi; Nagashima, Hitoshi; Shrestha,
 Sujen Man; Yokoyama, Yayoi; Takada, Kensaku
 CORPORATE SOURCE: Dep. Advanced Materials Chem., Graduate School
 Engineering, Yokohama Natl. Univ., Yokohama,
 240-8501, Japan

SOURCE: Bulletin of the Chemical Society of Japan (
 2003), 76(2), 355-361
 CODEN: BCSJA8; ISSN: 0009-2673

PUBLISHER: Chemical Society of Japan

DOCUMENT TYPE: Journal

LANGUAGE: English

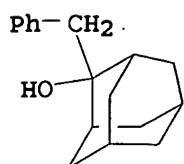
ED Entered STN: 24 Feb 2003

AB A new thermally reversible photochromic compound, 4',5'-
 hexafluoropropano-6'-phenylspiro[adamantane-2,7' (6'H)-
 benzothiophene], derived from UV-irradiation of 2-(1-adamantylidene-1-
 phenylmethyl)-3,3,4,4,5,5-hexafluoro-1-(3-thienyl)cyclopentene via
 the photochem. 6 π -electrocyclization followed by the thermal
 1,5-hydrogen migration, was synthesized and its photochem. and thermal
 properties were examined The structurally more simplified
 3,3,4,4,5,5-hexafluoro-2- (2-methyl-1-phenyl-1-propenyl)-1-
 (3-thienyl)cyclopentene did not yield the thermally reversible
 photochromic compound upon UV irradiation

IT 52889-89-1P, 2-Benzyl-2-adamantanol
 (in synthesis of (adamantylidenephénylmethyl)hexafluoro(thienyl)cyc
 lopentene)

RN 52889-89-1 HCAPLUS

CN Tricyclo[3.3.1.1^{3,7}]decan-2-ol, 2-(phenylmethyl)- (9CI) (CA INDEX
 NAME)

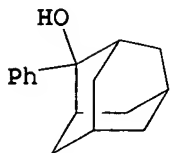


CC 74-1 (Radiation Chemistry, Photochemistry, and Photographic
and Other Reprographic Processes)
Section cross-reference(s): 27
IT 52889-89-1P, 2-Benzyl-2-adamantanol 535932-20-8P
(in synthesis of (adamantylidenephénylmethyl)hexafluoro(thienyl)cyc
lopentene)
REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR
THIS RECORD. ALL CITATIONS AVAILABLE IN THE
RE FORMAT

L61 ANSWER 12 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2003:36430 HCAPLUS
DOCUMENT NUMBER: 138:106431
TITLE: Process for preparation of lithium adamantylates,
adamantanols, and adamantyl esters
INVENTOR(S): Kikukawa, Tadashi; Murai, Yoshihiro; Kaimasu,
Taketoshi
PATENT ASSIGNEE(S): Chemical Soft Kaihatsu Kenkyusho Y. K., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2003012579	A	20030115	JP 2001-195705	20010628
			<--	
PRIORITY APPLN. INFO.:			JP 2001-195705	20010628
			<--	

OTHER SOURCE(S): MARPAT 138:106431
ED Entered STN: 16 Jan 2003
AB This invention pertains to prepn of CR1R2R3OLi, CR1R2R3OH, and
CR1R2R3OCOR4 [wherein R1 and R2 = independently H, alkyl, or aryl; or
R1 and R2 together form a ring with the carbon atom attached; R3 =
(cyclo)alkyl, alkenyl, or aryl; R4 = H, alkyl, alkenyl, or aryl]
comprising reaction of ketone R1R2CO and lithium, followed by the
addition of R3-halo. For example, 2-adamantanone was treated with
lithium in THF, followed by the addition of Et bromide to afford
2-ethyl-2-adamantanol (65%). This method avoids the use of dangerous
alkyllithium and low b.p. solvents to provide lithium alkoxides safely
in high yields. Adamantyl esters can be used as **resist**
materials in industry (no data).
IT 29480-18-0P
(preparation of lithium adamantylates, adamantanol, and adamantyl
esters)
RN 29480-18-0 HCAPLUS
CN Tricyclo[3.3.1.1^{3,7}]decan-2-ol, 2-phenyl- (CA INDEX NAME)



IC ICM C07C029-38
 ICS C07C035-23; C07C035-27; C07C035-29; C07C035-37; C07C035-46;
 C07C067-14; C07C069-54
 CC 23-7 (Aliphatic Compounds)
 IT 14451-85-5P 14451-86-6P 14648-57-8P 14648-58-9P
 29480-18-0P 38424-20-3P 38432-77-8P 53082-16-9P
 78829-26-2P 209982-56-9P 485804-65-7P 485804-66-8P
 (preparation of lithium adamantylates, adamantanols, and adamantyl
 esters)

L61 ANSWER 13 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2002:900853 HCAPLUS

DOCUMENT NUMBER: 138:18048

TITLE: Polymers for photoresists,
 photosensitive compositions containing them,
 manufacture of semiconductors, and (meth)acrylic
 acid esters

INVENTOR(S): Tsutsumi, Kiyoharu; Inoue, Keizo; Funaki,
 Katsunori; Nakano, Tatsuya; Horai, Akira

PATENT ASSIGNEE(S): Daicel Chemical Industries, Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 98 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

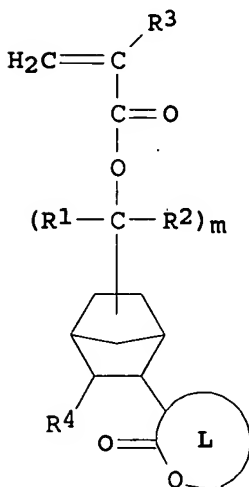
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002338627	A	20021127	JP 2001-153173	20010522
			<--	
PRIORITY APPLN. INFO.:			JP 2001-153173	20010522
			<--	

OTHER SOURCE(S): MARPAT 138:18048

ED Entered STN: 27 Nov 2002

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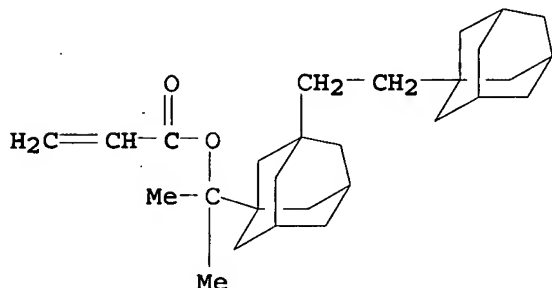
AB The polymers contain ≥ 1 monomer units derived from (meth)acrylic acid esters $\text{CH}_2:\text{CRaC}(:\text{O})\text{O}(\text{CR}_1\text{R}_2)\text{mXC}(:\text{O})(\text{CH}_2)\text{nY}$, $\text{CH}_2:\text{CRaC}(:\text{O})\text{OCR}_1(\text{CH}_2)\text{n}_2\text{Y}_2(\text{CH}_2)\text{n}_1\text{Y}_1$, $\text{CH}_2:\text{CRaC}(:\text{O})\text{OCR}_1\text{R}_2(\text{CH}_2)\text{nY}$, $\text{CH}_2:\text{CRaC}(:\text{O})\text{OXCH}[(\text{CH}_2)\text{mCO}_2\text{R}_3]\text{CO}_2\text{R}_3$, I, $\text{CH}_2:\text{CRaC}(:\text{O})\text{O}(\text{CH}_2)\text{nXAY}$, and $\text{CH}_2:\text{CRaC}(:\text{O})\text{OCR}_1\text{R}_2\text{XAY}$ [$\text{Ra} = \text{H}, \text{Me}$; $\text{R}_1, \text{R}_2 = \text{H}, \text{C}_1\text{-5 hydrocarbyl}$; $\text{R}_3 = (\text{un})\text{substituted tertiary hydrocarbyl, tetrahydropyranyl, tetrahydrofuranyl}$; $\text{R}_4 = \text{H}, \text{C}_1\text{-20 hydrocarbyl, (protected) OH or CH}_2\text{OH}$; $\text{A} = \text{single bond, methylene, (hydroxy)ethylene}$; $\text{L} = (\text{un})\text{substituted } \geq 5\text{-membered lactone}$; $\text{X} = (\text{un})\text{substituted alicyclic group}$; $\text{Y}, \text{Y}_1, \text{Y}_2 = (\text{un})\text{substituted alicyclic group}$; $\text{m} = 0, 1$; $\text{n}, \text{n}_1, \text{n}_2 = 0\text{-}2$]. Semiconductors are manufactured by (1) applying the photosensitive compns. containing the polymers and photoacid generators on substrates, (2) exposing the resulting films, and (3) developing to give patterns. The compns. show good etching resistance, high resolution, and good transparency.

IT 477520-79-9P

(etching-resistant polymers of alicyclic group-containing (meth)acrylic acid esters for photoresists)

RN 477520-79-9 HCAPLUS

CN 2-Propenoic acid, 1-methyl-1-[3-(2-tricyclo[3.3.1.1^{3,7}]dec-1-ylethyl)tricyclo[3.3.1.1^{3,7}]dec-1-yl]ethyl ester (CA INDEX NAME)



IC ICM C08F020-28

ICS C08F020-18; C08F220-18; C08F220-28; C08F222-06; C08F232-08; G03F007-039; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 38, 76

ST alicyclic acrylate polymer etching resistance
photoresist; methacrylate alicyclic polymer etching resistance photoresist; semiconductor manuf
alicyclic acrylate polymer photoresist; adamantane acrylate polymer etching resistance photoresist; norbornene acrylate polymer etching resistance photoresist

IT Photoresists

Semiconductor device fabrication

(etching-resistant polymers of alicyclic group-containing (meth)acrylic acid esters for photoresists)

IT 477520-65-3P	477520-67-5P	477520-69-7P	477520-71-1P
477520-73-3P	477520-76-6P	477520-77-7P	477520-78-8P
477520-79-9P	477520-80-2P	477520-81-3P	477520-82-4P
477520-83-5P	477539-82-5P	477539-84-7P	477539-86-9P
477539-87-0P	477539-88-1P	477539-90-5P	477539-91-6P
477539-93-8P	477539-94-9P	477539-95-0P	477539-96-1P
477539-97-2P	477539-98-3P	477539-99-4P	477540-00-4P

477540-01-5P 477540-02-6P 477540-03-7P 477540-04-8P
 477540-05-9P 477540-06-0P 477540-07-1P 477540-08-2P
 477540-09-3P

(etching-resistant polymers of alicyclic group-containing
 (meth)acrylic acid esters for photoresists)

IT 477520-84-6P 477520-86-8P 477520-88-0P 477520-90-4P
 477520-92-6P 477520-94-8P 477520-97-1P 477520-98-2P
 477520-99-3P 477521-01-0P 477521-02-1P 477521-04-3P
 477521-06-5P 477521-08-7P 477521-10-1P 477521-12-3P
 477521-14-5P 477521-16-7P 477521-18-9P 477521-20-3P
 477521-22-5P 477521-24-7P 477521-26-9P 477521-28-1P
 477521-30-5P 477521-32-7P 477521-34-9P 477521-36-1P
 477540-11-7P 477540-13-9P 477540-15-1P 477540-17-3P
 477540-19-5P 477540-21-9P 477540-23-1P 477540-25-3P
 477540-27-5P 477540-29-7P 477540-31-1P 477540-33-3P
 477540-35-5P 477540-37-7P 477540-39-9P 477540-42-4P
 477540-44-6P 477540-46-8P 477540-48-0P 477540-50-4P
 477540-52-6P 477540-54-8P 477541-51-8P 477579-37-6P
 477579-38-7P 477579-39-8P 477579-40-1P

(etching-resistant polymers of alicyclic group-containing
 (meth)acrylic acid esters for photoresists)

IT 33624-09-8P 113249-47-1P 423166-29-4P 477520-64-2P
 477520-66-4P 477520-68-6P 477520-70-0P 477520-72-2P
 477520-74-4P 477520-75-5P 477539-81-4P 477539-83-6P
 477539-85-8P 477539-89-2P 477539-92-7P

(intermediates in preparation of monomers; etching-resistant
 polymers of alicyclic group-containing (meth)acrylic acid esters for
 photoresists)

IT 75-07-0, Acetaldehyde, reactions 96-48-0, γ -Butyrolactone
 121-46-0, Norbornadiene 281-23-2, Adamantane 498-66-8,
 2-Norbornene 541-16-2, Tert-Butyl malonate 700-58-3,
 2-Oxadamantane 702-98-7, 2-Methyl-2-adamantanol 768-95-6,
 1-Adamantanol 775-64-4 814-68-6, Acrylic acid chloride 920-46-7,
 Methacrylic acid chloride 2146-39-6, 2-Vinylnorbornane 5063-03-6,
 5-Acetyl-2-norbornene 5453-80-5, 2-Norbornene-5-carboxaldehyde
 5963-26-8 6600-42-6, 1-Vinyladamantane 13080-90-5,
 Bicyclo[2.2.1]hept-5-en-2-ol 17610-50-3 19396-83-9,
 Norbornane-2-carbaldehyde 21898-84-0, 4-
 Oxatricyclo[4.3.1.13,8]undecan-5-one 22497-08-1 45022-27-3,
 tert-Butyl maleate 85718-44-1 420120-31-6

(reactants in preparation of monomers; etching-resistant
 polymers of alicyclic group-containing (meth)acrylic acid esters for
 photoresists)

IT 477520-96-0P
 (undetching-resistant polymers of alicyclic group-containing
 (meth)acrylic acid esters for photoresists)

L61 ANSWER 14 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2002:728858 HCAPLUS

DOCUMENT NUMBER: 137:255082

TITLE: Heat-resistant low-crystallinity
 adamantane derivative and its use for organic
 electroluminescent device with high luminescent
 efficiency and long service life

INVENTOR(S): Takeuchi, Hisato; Tanaka, Hiromitsu; Mouri,
 Makoto; Mori, Tomohiko; Kojima, Kazushige

PATENT ASSIGNEE(S): Toyota Central Research and Development
 Laboratories, Inc., Japan; Denso Co., Ltd.

SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.

CODEN: JKXXAF

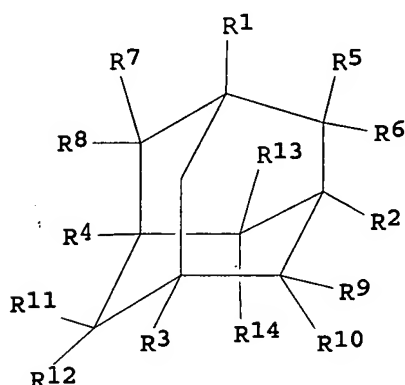
DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002275103	A	20020925	JP 2001-81434	20010321

PRIORITY APPLN. INFO.:

JP 2001-81434 20010321
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OTHER SOURCE(S): MARPAT 137:255082
 ED Entered STN: 25 Sep 2002
 GI



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AB Title derivative is expressed by a general formula I (≥ 3 of R1-R14 = functional units having hole-transporting, luminous, or electron-transporting properties). The electroluminescent device has ≥ 1 layer containing the adamantane derivative between electrodes. Thus, an electroluminescent device containing tetrapyrenyl-substituted adamantane as an electroluminescent layer and NPD as a hole-transporting layer emitted blue light with luminance 350 cd/m² at 10 mA/cm².

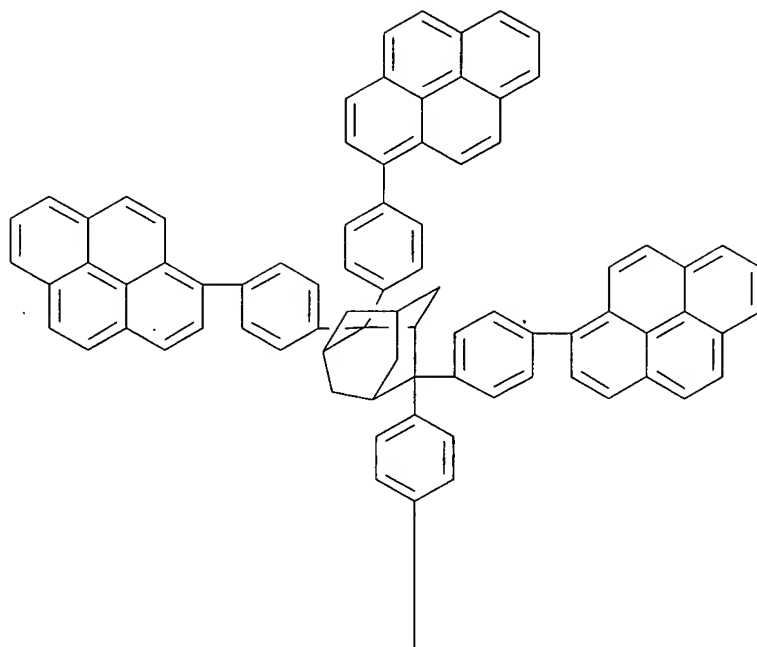
IT 460991-22-4P 460991-25-7P

(preparation of adamantane derivative for organic electroluminescent device with high luminescent efficiency and long service life)

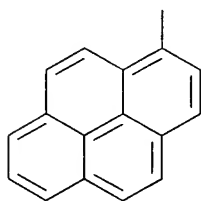
RN 460991-22-4 HCAPLUS

CN Pyrene, 1,1',1'',1'''-(tricyclo[3.3.1.1.3,7]decane-2,4-diylidenetetra-4,1-phenylene)tetrakis- (9CI) (CA INDEX NAME)

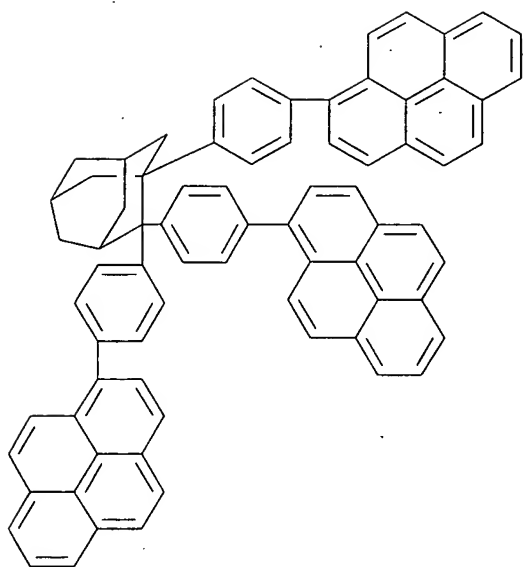
PAGE 1-A



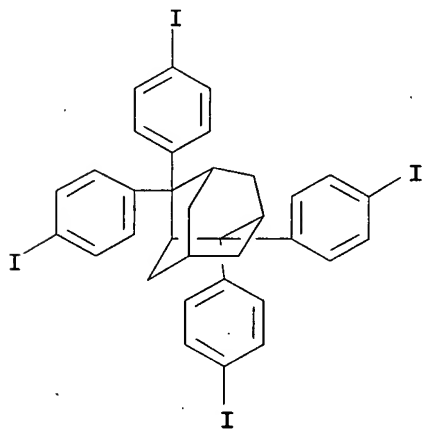
PAGE 2-A



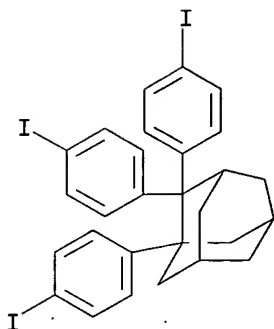
RN 460991-25-7 HCAPLUS
CN Pyrene, 1,1',1''-(tricyclo[3.3.1.1.3,7]dec-1-yl-2-ylidenetri-4,1-phenylene)tris- (9CI) (CA INDEX NAME)



IT 460991-21-3P 460991-24-6P
 (preparation of adamantane derivative for organic electroluminescent device
 with high luminescent efficiency and long service life)
 RN 460991-21-3 HCAPLUS
 CN Tricyclo[3.3.1.3⁰]decane, 2,2,4,4-tetrakis(4-iodophenyl)- (CA INDEX
 NAME)



RN 460991-24-6 HCAPLUS
 CN Tricyclo[3.3.1.3⁰]decane, 1,2,2-tris(4-iodophenyl)- (CA INDEX NAME)



IC ICM C07C013-68
 ICS C07C025-22; C07C211-50; C09K011-06; H05B033-14; H05B033-22
 CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
 Section cross-reference(s): 24
 IT 460991-22-4P 460991-25-7P
 (preparation of adamantane derivative for organic electroluminescent device with high luminescent efficiency and long service life)
 IT 460991-20-2P 460991-21-3P 460991-23-5P
 460991-24-6P
 (preparation of adamantane derivative for organic electroluminescent device with high luminescent efficiency and long service life)

L61 ANSWER 15 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2001:192020 HCAPLUS

DOCUMENT NUMBER: 134:237239

TITLE: Preparation of dicarboxylic acid diadamantyl esters

INVENTOR(S): Suzuki, Shintaro

PATENT ASSIGNEE(S): Idemitsu Petrochemical Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001072645	A	20010321	JP 1999-252149	19990906

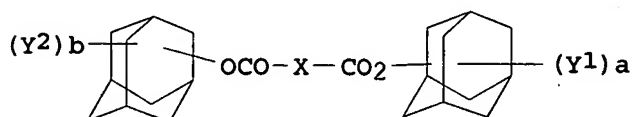
PRIORITY APPLN. INFO.:

JP 1999-252149 19990906

OTHER SOURCE(S): MARPAT 134:237239

ED Entered STN: 21 Mar 2001

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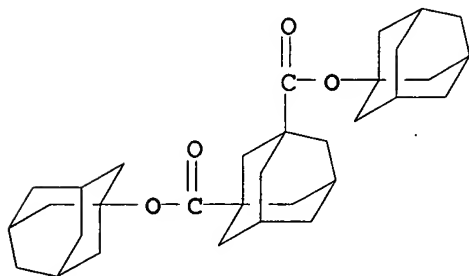
AB Title compds. I (X = C1-20 chain hydrocarbylene, C3-12 alicyclic hydrocarbylene, C6-12 polycyclic hydrocarbylene; Y1, Y2 = H, halo, OH, C1-8 alkyl, C1-8 alkoxy, CO₂H, CO₂R; R = C1-8 alkyl; a, b = 1-3), useful as heat- and water-resistant optical or coating materials (no data), are prepared 1-Adamantanol (15.2 g) was esterified with 5.9 g succinic acid in n-octane in the presence of H₂SO₄ under reflux for 4 h to give 19.3 g diadamantyl succinate.

IT 329900-54-1P

(preparation of dicarboxylic acid diadamantyl esters)

RN 329900-54-1 HCAPLUS

CN Tricyclo[3.3.1.1^{3,7}]decane-1,3-dicarboxylic acid, bis(tricyclo[3.3.1.1^{3,7}]dec-1-yl) ester (9CI) (CA INDEX NAME)



IC ICM C07C069-34

ICS C07C069-74; C07C069-753

CC 24-8 (Alicyclic Compounds)

Section cross-reference(s): 42, 73

IT Coating materials

(heat- and water-resistant; preparation of dicarboxylic acid diadamantyl esters for)

IT 329900-53-0P 329900-54-1P

(preparation of dicarboxylic acid diadamantyl esters)

L61 ANSWER 16 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2000:806430 HCAPLUS

DOCUMENT NUMBER: 134:214835

TITLE: Dendrimer-based chemically amplified
resists for sub-100-nm lithography

AUTHOR(S): Tully, David C.; Trimble, Alexander R.; Frechet,
Jean M. J.

CORPORATE SOURCE: Dep. Chem., Univ. of California, Berkeley, CA, USA
SOURCE: Proceedings of SPIE-The International Society for
Optical Engineering (2000), 3999(Pt. 2,
Advances in Resist Technology and Processing
XVII), 1202-1206

CODEN: PSISDG; ISSN: 0277-786X

PUBLISHER: SPIE-The International Society for Optical
Engineering

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 16 Nov 2000

AB Several new poly(benzyl ether) and poly(benzyl ester) dendrimers that incorporate acid- and thermally-labile peripheral groups have been synthesized. tert-Bu ester terminated poly(benzyl ether) dendrimers were synthesized using α -bromo-tert-Bu acetate in the preliminary protection step to afford the first generation alc. A standard bromination of the focal point benzylic alc. was used for the

activation step, while standard Williamson ether conditions were used for the coupling steps to afford higher generation poly(benzyl ether) dendrons. tert-Bu ester terminated dendrons were then coupled to a difunctional core to produce the [G-3] dendrimer. tert-Bu carbonate (t-Boc) terminated poly(benzyl ester) dendrimers were also synthesized. This class of dendrimers was synthesized by first protecting monomeric building block 3,5-dihydroxybenzaldehyde with di-t-Bu dicarbonate. A reductive activation step afforded the [G-1] alc. The growth steps were accomplished by either Mitsunobu etherification with 3,5-dihydroxybenzaldehyde or by esterification with 5-hydroxymethylisophthalic acid. Finally, coupling of the benzyl alc. dendrons to a polyfunctional core afforded second and third generation dendrimers. Chemical amplified **resists** formulated from both t-Bu ester and t-Boc terminated dendrimers show high sensitivity to DUV and e-beam irradiation. Feature sizes well below 100 nm have been routinely patterned using e-beam lithog.

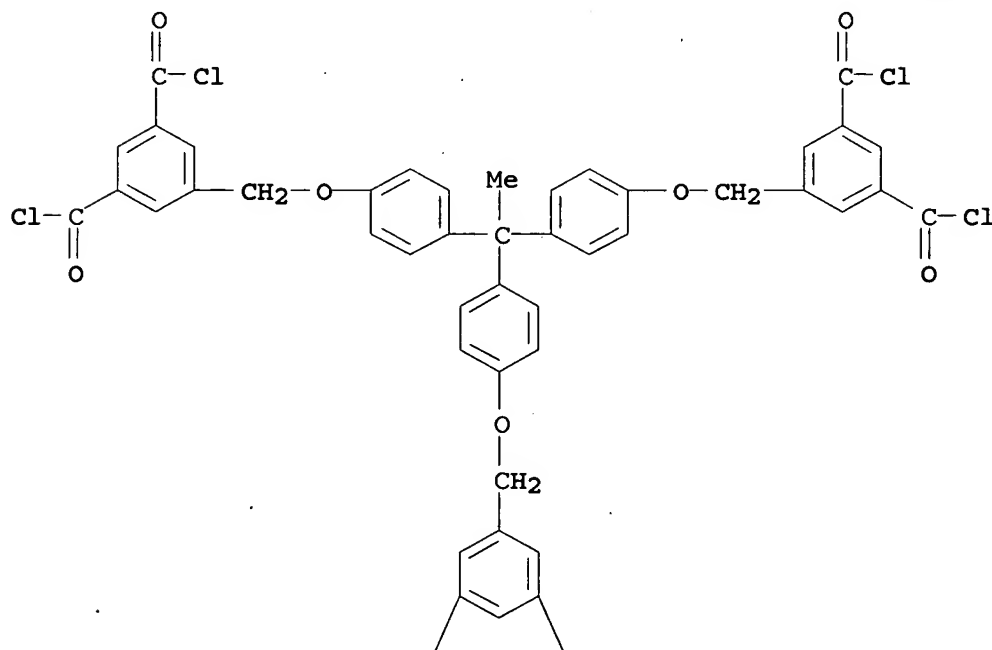
IT 267874-31-7 305323-42-6 305323-45-9

(preparation of tert-Bu carbonate terminated dendrimer for resist application)

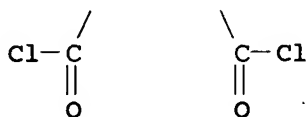
RN 267874-31-7 HCAPLUS

CN 1,3-Benzenedicarbonyl dichloride, 5,5',5''-[ethylidynetris(4,1-phenyleneoxymethylene)]tris- (9CI) (CA INDEX NAME)

PAGE 1-A

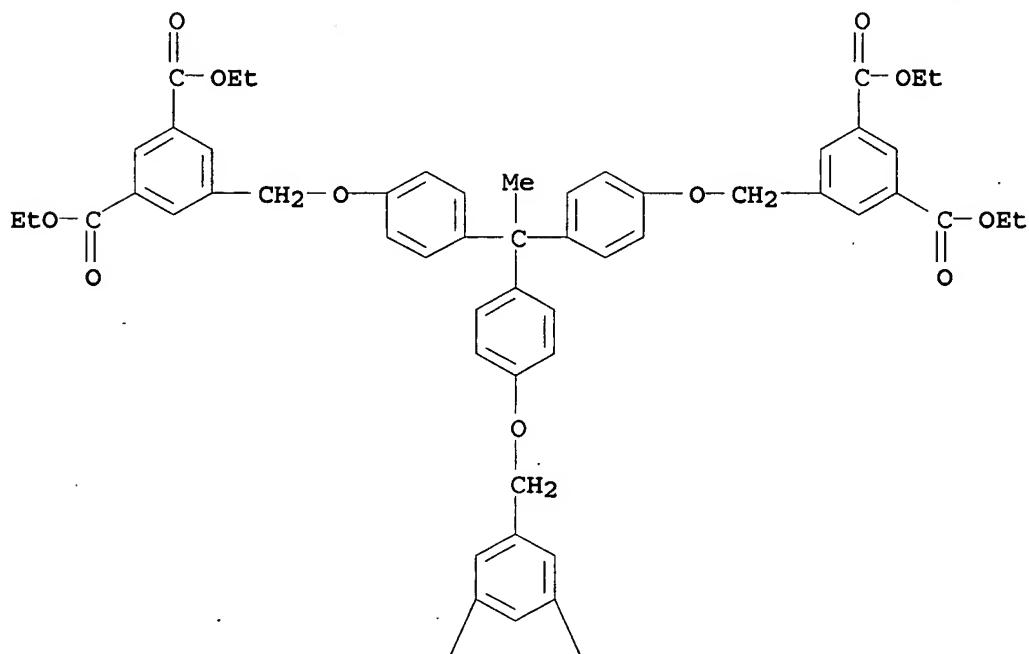


PAGE 2-A



RN 305323-42-6 HCAPLUS
 CN 1,3-Benzenedicarboxylic acid, 5,5',5''-[ethylidynetris(4,1-phenyleneoxymethylene)]tris-, hexaethyl ester (9CI) (CA INDEX NAME)

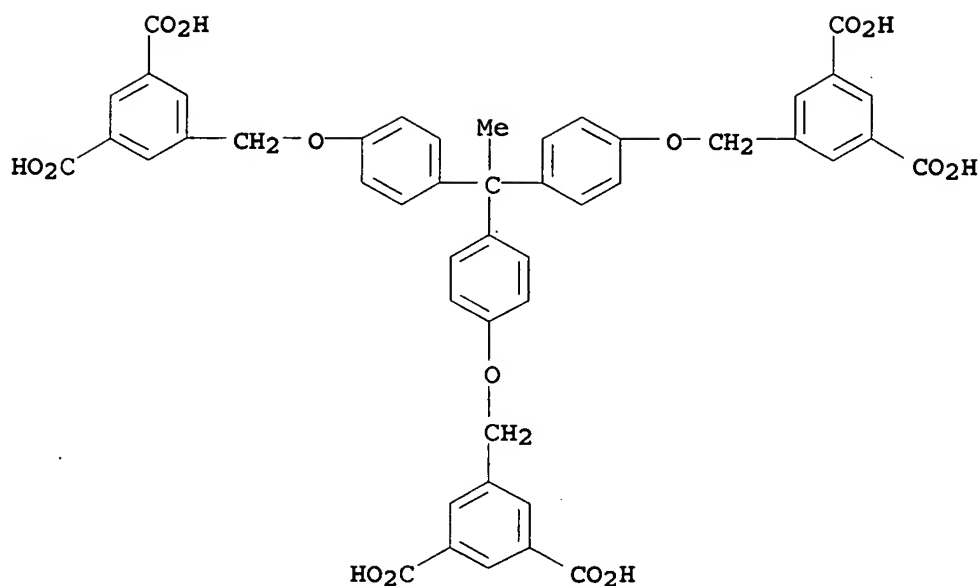
PAGE 1-A



PAGE 2-A



RN 305323-45-9 HCAPLUS
 CN 1,3-Benzenedicarboxylic acid, 5,5',5''-[ethylidynetris(4,1-phenyleneoxymethylene)]tris- (9CI) (CA INDEX NAME)



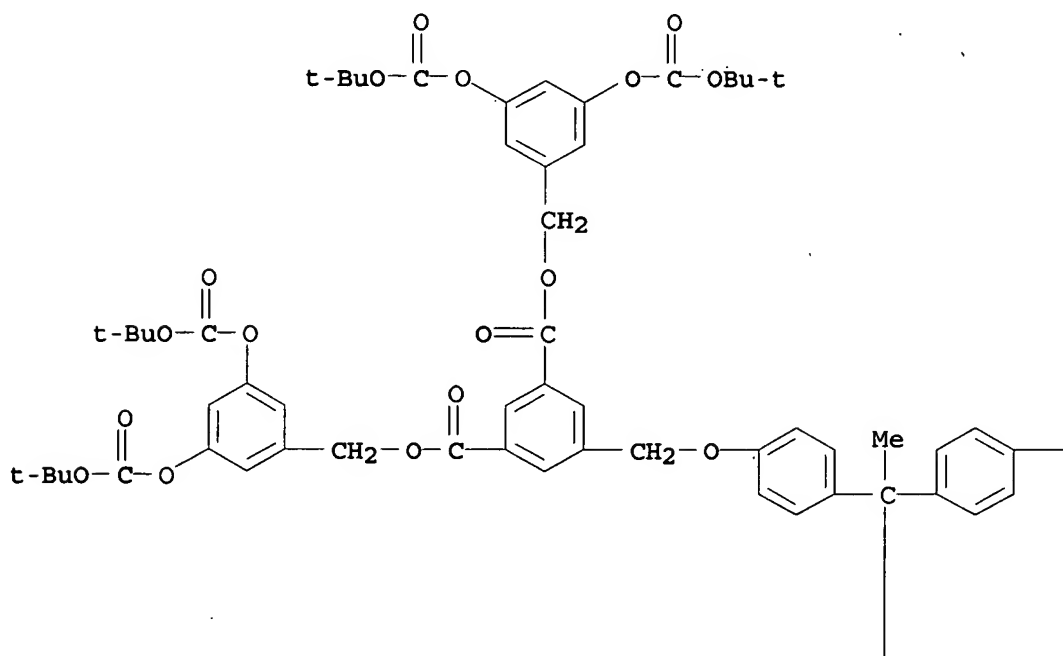
IT 267874-32-8P

(tert-Bu carbonate terminated dendrimer for chemical amplified resists for sub-100 nm photolithog.)

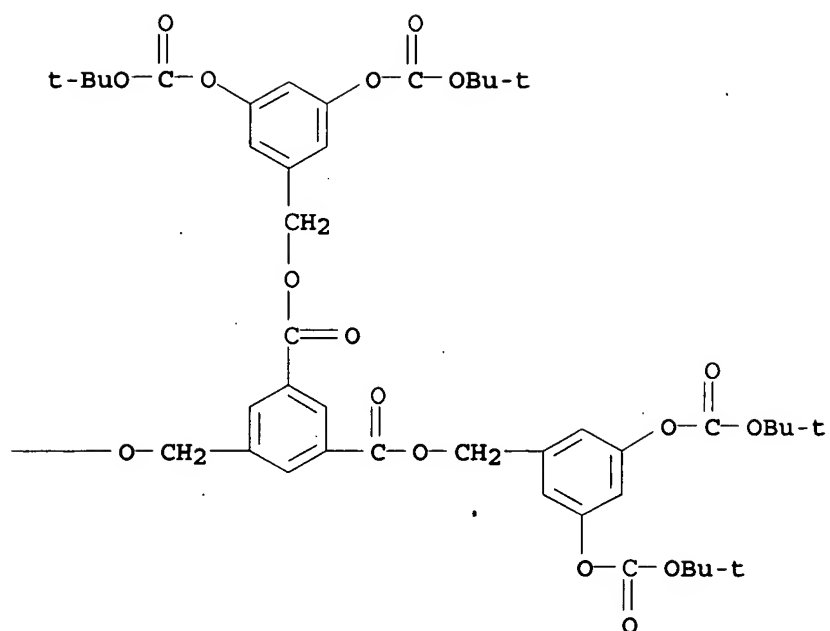
RN 267874-32-8 HCAPLUS

CN 1,3-Benzenedicarboxylic acid, 5,5',5''-[ethylidynetris(4,1-phenyleneoxymethylene)]tris-, hexakis[[3,5-bis[[[(1,1-dimethylethoxy)carbonyl]oxy]phenyl]methyl] ester (9CI) (CA INDEX NAME)

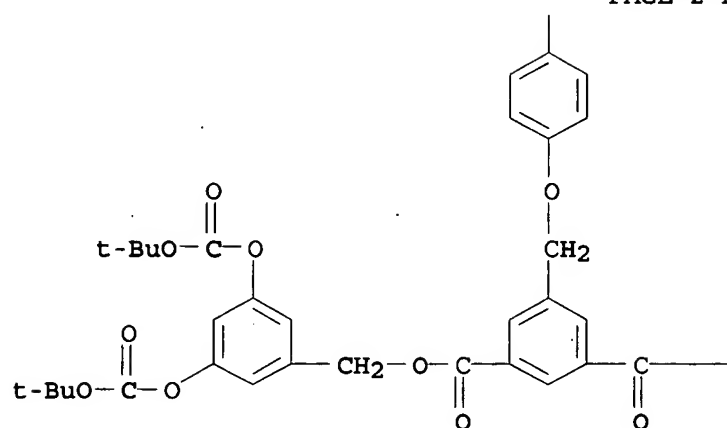
PAGE 1-A



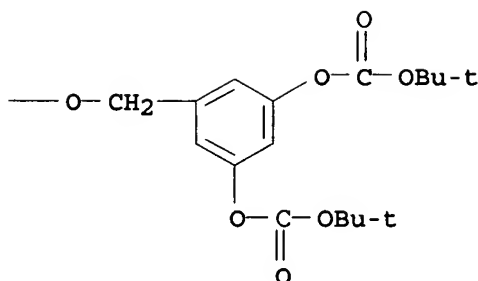
PAGE 1-B



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PAGE 2-B



- CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
- ST dendrimer based chem amplified photoresist vacuum UV lithog
- IT Electron beam resists
- Photoresists**
(chemical amplified; chemical amplified resists for sub-100 nm lithog. based on tert-Bu acetate- or tert-Bu carbonate terminated dendrimers)
- IT Polyesters, uses
(dendrimers; chemical amplified resists for sub-100 nm lithog. based on tert-Bu acetate- or tert-Bu carbonate terminated dendrimers)
- IT Dendritic polymers
(polyesters; chemical amplified resists for sub-100 nm lithog. based on tert-Bu acetate- or tert-Bu carbonate terminated dendrimers)
- IT 328396-58-3DP, tert-Bu hydroxyacetate ether-terminated
(dendritic; tert-Bu ester terminated dendrimer for chemical amplified resists for sub-100 nm photolithog.)
- IT 57840-38-7, Triphenylsulfonium hexafluoroantimonate 213740-80-8
(photoacid generator; chemical amplified resists for sub-100 nm photolithog. based on tert-Bu acetate- or tert-Bu carbonate terminated dendrimers)
- IT 267874-30-6 267874-31-7 305323-42-6
305323-45-9
(preparation of tert-Bu carbonate terminated dendrimer for resist application)
- IT 267874-29-3 328084-37-3 328084-38-4 328084-39-5 328084-40-8
(preparation of tert-Bu ester terminated dendrimer for photoresist application)
- IT 200133-25-1
(preparation of tert-Bu ester terminated dendrimer for resist application)
- IT 26153-38-8, 3,5-Dihydroxybenzaldehyde
(reaction with di-tert-Bu carbonate in preparation of ter-Bu carbonate terminated dendrimer for photoresist application)
- IT 34619-03-9, Di-tert-butyl carbonate

(reaction with dihydroxybenzaldehyde in preparation of ter-Bu carbonate terminated dendrimer for **resist** application)

IT 5292-43-3
(reaction with dihydroxybenzyl alc. in preparation of tert-Bu ester terminated dendrimer for **resist** application)

IT 29654-55-5, 3,5-Dihydroxybenzyl alcohol
(reaction with α -bromo-tert-Bu acetate in preparation of tert-Bu ester terminated dendrimer for **resist** application)

IT 267874-32-8P
(tert-Bu carbonate terminated dendrimer for chemical amplified **resists** for sub-100 nm photolithog.)

REFERENCE COUNT: 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L61 ANSWER 17 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2000:633845 HCAPLUS

DOCUMENT NUMBER: 133:357149

TITLE: Dendrimers with thermally labile end groups: An alternative approach to chemically amplified **resist** materials designed for sub-100 nm lithography

AUTHOR(S): Tully, David C.; Trimble, Alexander R.; Frechet, Jean M. J.

CORPORATE SOURCE: Department of Chemistry, University of California at Berkeley, Berkeley, CA, 94720-1460, USA

SOURCE: Advanced Materials (Weinheim, Germany) (2000), 12(15), 1118-1122
CODEN: ADVMEW; ISSN: 0935-9648

PUBLISHER: Wiley-VCH Verlag GmbH

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 13 Sep 2000

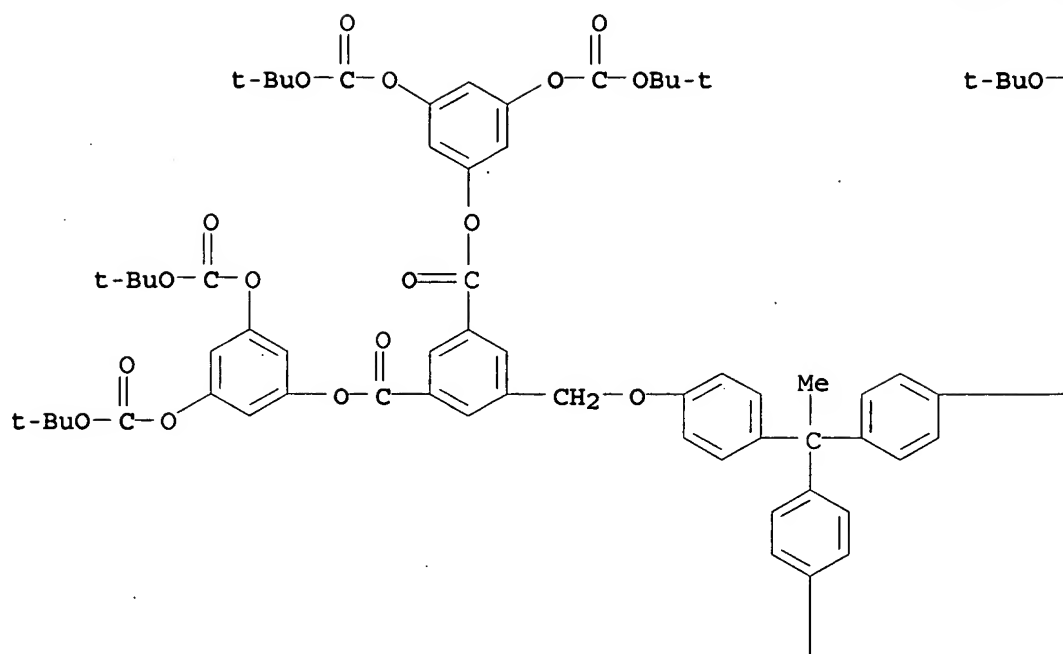
AB Chemical amplified **resists** are described which are based on tert-butoxycarbonyloxy-terminated dendrimers and photoacid generators. **Resist** formulations prepared from these dendrimers were highly sensitive to both deep-UV and electron-beam exposures, providing reproducible patterning <100 nm.

IT 305323-50-6P
(lithog. chemical amplified **resists** using tert-butoxycarbonyloxy-terminated dendrimers)

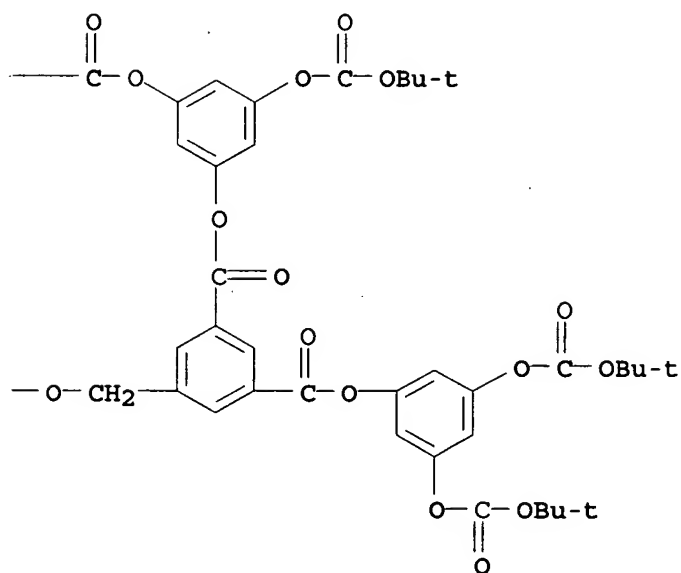
RN 305323-50-6 HCAPLUS

CN 1,3-Benzenedicarboxylic acid, 5,5',5''-[ethylidynetris(4,1-phenyleneoxymethylene)]tris-, hexakis[3,5-bis[(1,1-dimethylethoxy)carbonyl]oxy]phenyl] ester (9CI) (CA INDEX NAME)

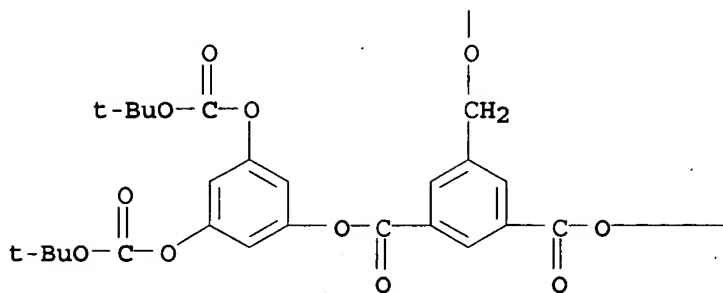
PAGE 1-A



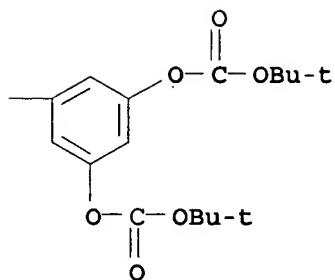
PAGE 1-B



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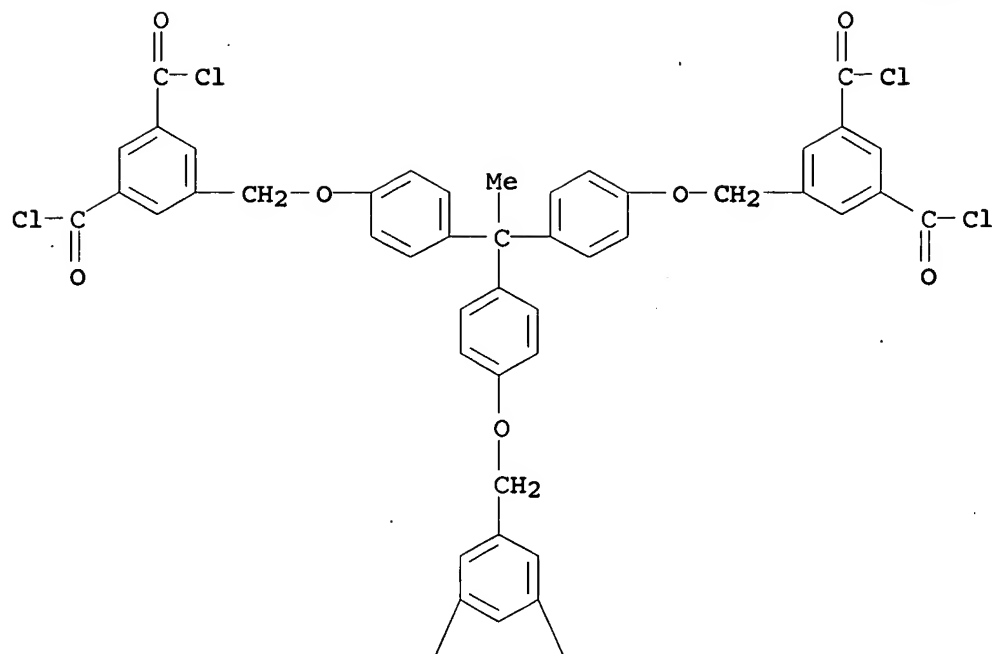


PAGE 2-B



IT 267874-31-7P 305323-42-6P 305323-45-9P
 (synthesis of tert-butoxycarbonyloxy-terminated dendrimers for
 lithog. chemical amplified **resists** formulations)
 RN 267874-31-7 HCAPLUS
 CN 1,3-Benzenedicarbonyl dichloride, 5,5',5''-[ethylidynetris(4,1-
 phenyleneoxymethylene)]tris- (9CI) (CA INDEX NAME)

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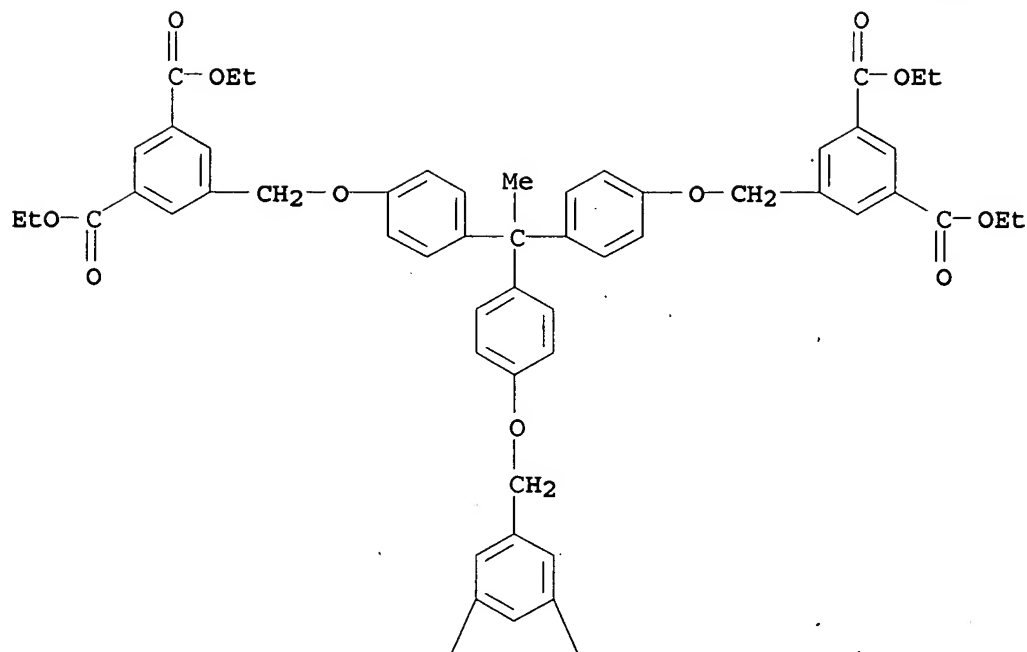


PAGE 2-A



RN 305323-42-6 HCAPLUS
 CN 1,3-Benzenedicarboxylic acid, 5,5',5''-[ethylidynetris(4,1-phenyleneoxymethylene)]tris-, hexaethyl ester (9CI) (CA INDEX NAME)

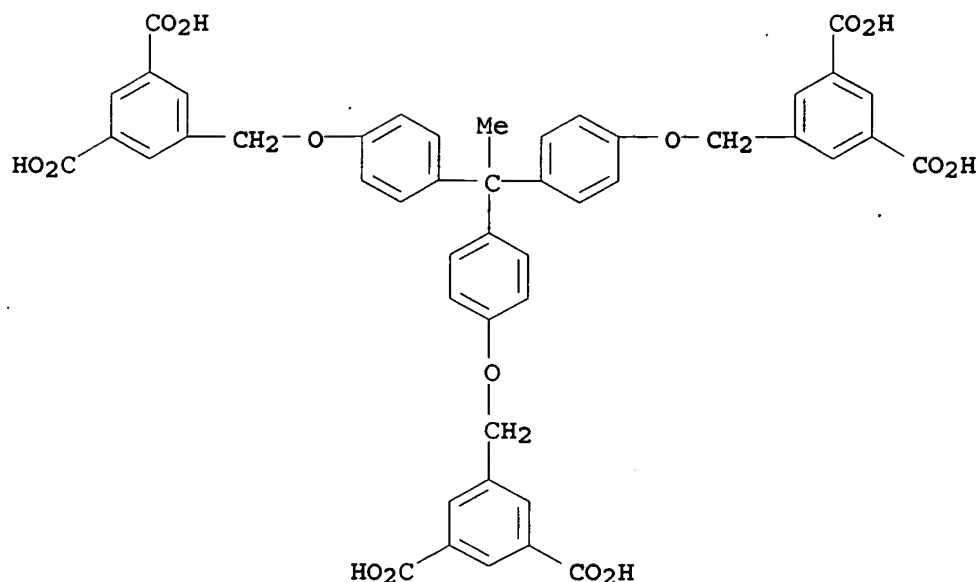
PAGE 1-A



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RN 305323-45-9 HCAPLUS
CN 1,3-Benzenedicarboxylic acid, 5,5',5''-[ethylidynetris(4,1-phenyleneoxymethylene)]tris- (9CI) (CA INDEX NAME)



CC 74-1 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST chem amplified lithog **resist** butoxycarbonyloxy terminated dendrimer; **photoresist** chem amplified butoxycarbonyloxy terminated dendrimer; electron beam **resist** chem amplified butoxycarbonyloxy terminated dendrimer

IT Electron beam **resists**
Photoresists
 (chemical amplified; lithog. chemical amplified **resists** using tert-butoxycarbonyloxy-terminated dendrimers)

IT 305323-50-6P 305820-71-7P
 (lithog. chemical amplified **resists** using tert-butoxycarbonyloxy-terminated dendrimers)

IT 57840-38-7, Triphenylsulfonium hexafluoroantimonate 240435-11-4
 (photoacid generator; lithog. chemical amplified **resists** using tert-butoxycarbonyloxy-terminated dendrimers)

IT 26153-38-8P, 3,5-Dihydroxybenzaldehyde 267874-30-6P
 267874-31-7P 305323-33-5P 305323-36-8P 305323-39-1P
 305323-42-6P 305323-45-9P
 (synthesis of tert-butoxycarbonyloxy-terminated dendrimers for lithog. chemical amplified **resists** formulations)

REFERENCE COUNT: 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L61 ANSWER 18 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2000:208080 HCAPLUS

DOCUMENT NUMBER: 132:341060

TITLE: Dendrimer-based chemically amplified **resist** materials

AUTHOR(S): Tully, David C.; Trimble, Alexander R.; Frechet, Jean M. J.

CORPORATE SOURCE: Department of Chemistry, University of California, Berkeley, CA, 94720-1460, USA

SOURCE: Polymer Preprints (American Chemical Society, Division of Polymer Chemistry) (2000),

41(1), 142-143

CODEN: ACPPAY; ISSN: 0032-3934

PUBLISHER:

American Chemical Society, Division of Polymer Chemistry

DOCUMENT TYPE:

Journal

LANGUAGE:

English

ED Entered STN: 31 Mar 2000

AB The authors have been utilizing the unusual properties of dendritic polymers in hopes of achieving an improved class of resist materials with the capability of imaging features with mol. scale resolution. Several new dendrimers were synthesized containing acid and thermally labile groups on their periphery. The tert-Bu ester and carbonate peripheral groups can be removed by an acid-catalyzed thermolysis to drastically alter the solubility properties of the dendrimer, thus forming the basis for a 2-tone chemical amplified resist material. This 2-tone system shows a high sensitivity towards both DUV and electron beam irradiation. The authors were able to pattern feature sizes below 100 nm using e-beam lithog.

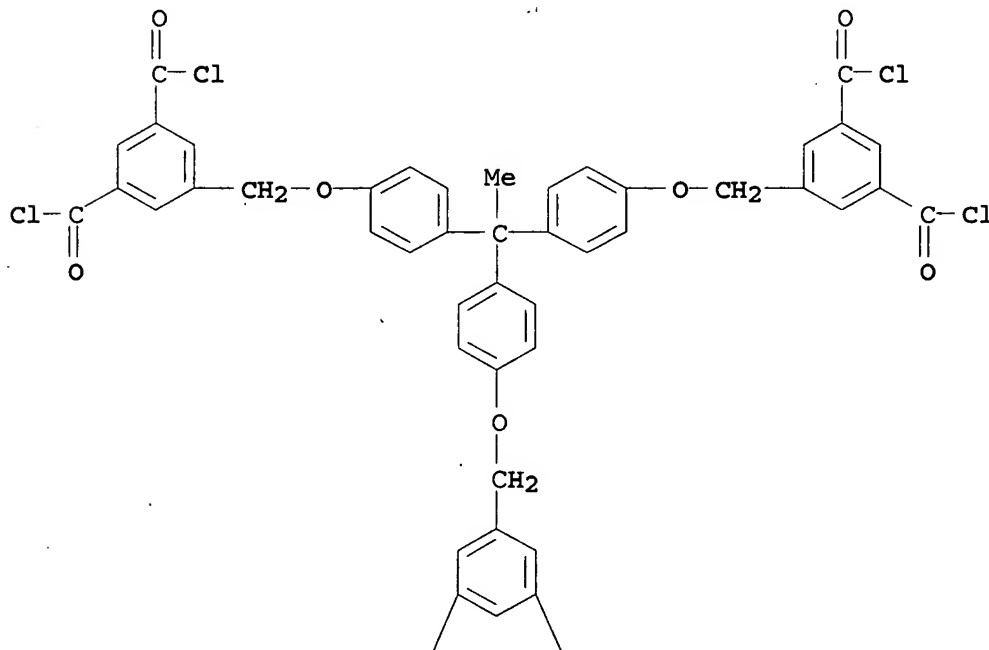
IT 267874-31-7P 267874-32-8P

(dendrimer-based chemical amplified resist material for fabrication of DRAMs below 100 nm)

RN 267874-31-7 HCAPLUS

CN 1,3-Benzenedicarbonyl dichloride, 5,5',5''-[ethylidynetris(4,1-phenyleneoxymethylene)]tris- (9CI) (CA INDEX NAME)

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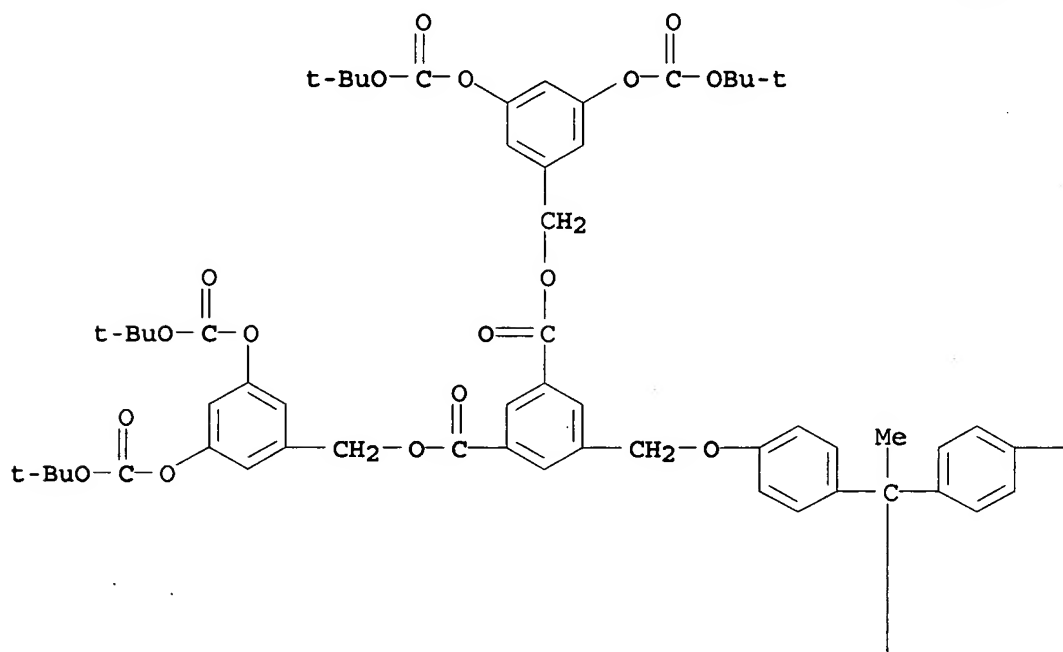


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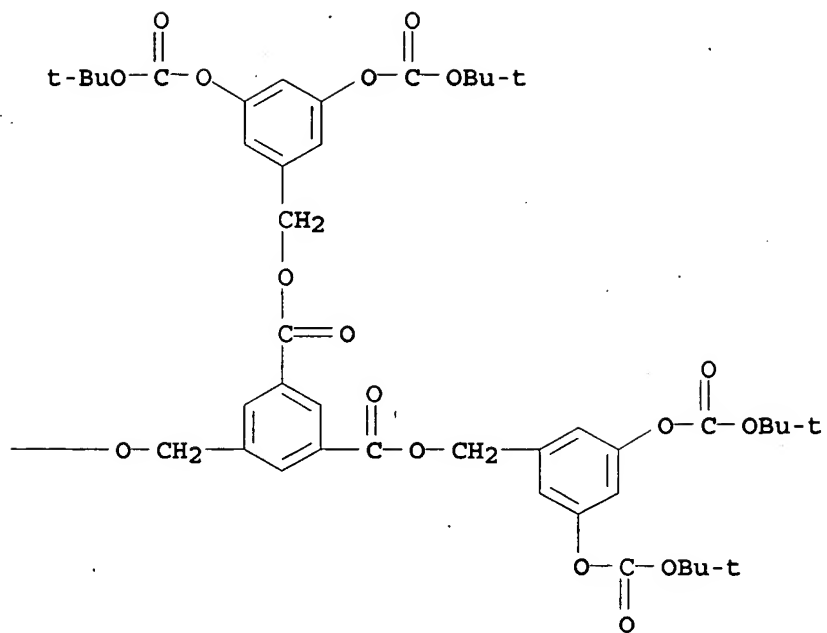


RN	267874-32-8	HCAPLUS
CN	1,3-Benzenedicarboxylic acid, 5,5',5''-[ethylidynetris(4,1-phenyleneoxymethylene)]tris-, hexakis[[3,5-bis[[1,1-dimethylethoxy)carbonyl]oxy]phenyl]methyl ester (9CI) (CA INDEX NAME)	

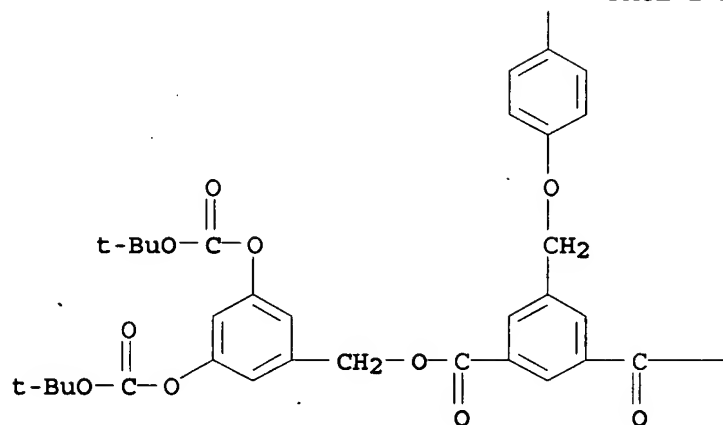
PAGE 1-A



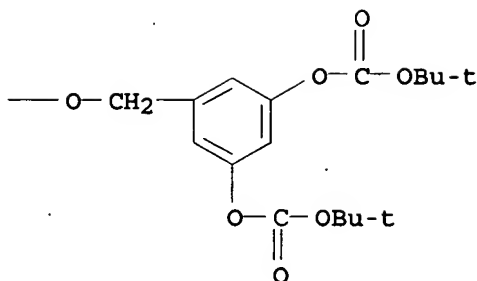
PAGE 1-B



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- CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
- ST dendrimer amplified resist tert butyl ester poly benzyl ether
- IT Memory devices
(DRAM (dynamic random access); dendrimer-based chemical amplified resist material for fabrication of DRAMs below 100 nm)
- IT Resists
(chemical amplified; dendrimer-based chemical amplified resist material for fabrication of DRAMs below 100 nm)
- IT Electron beam lithography
(dendrimer-based chemical amplified resist material for fabrication of DRAMs below 100 nm)
- IT Dendritic polymers
(dendrimer-based chemical amplified resist material for fabrication of DRAMs below 100 nm)
- IT 267874-31-7P 267874-32-8P 267890-50-6P
(dendrimer-based chemical amplified resist material for fabrication of DRAMs below 100 nm)
- IT 99-10-5, 3,5-Dihydroxybenzoic acid 26153-38-8, 3,5-Dihydroxybenzaldehyde 200133-25-1 267663-15-0 267874-29-3 267874-30-6
(preparation of dendrimer-based chemical amplified resist material using)

REFERENCE COUNT: 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L61 ANSWER 19 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2000:34310 HCAPLUS

DOCUMENT NUMBER: 132:85856

TITLE: Radiation-sensitive polymer compositions for photoresists

INVENTOR(S): Inomata, Katsumi; Akiyama, Masahiro; Iwanaga, Shinichiro

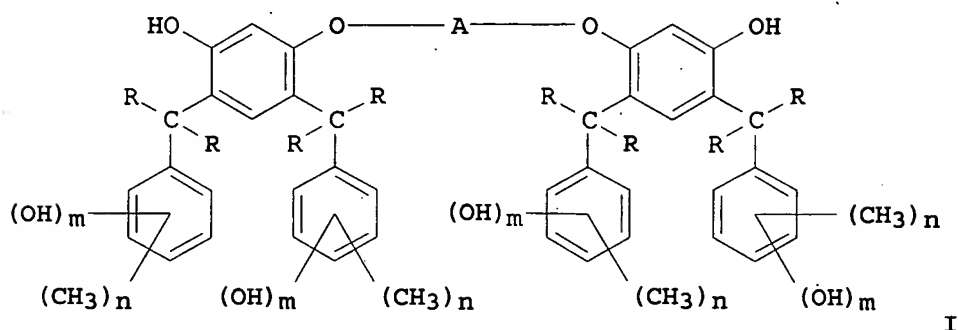
PATENT ASSIGNEE(S): JSR Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.

DOCUMENT TYPE: CODEN: JKXXAF
 LANGUAGE: Patent
 FAMILY ACC. NUM. COUNT: Japanese 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000010269	A	20000114	JP 1998-189671	19980619
<--				
PRIORITY APPLN. INFO.:			JP 1998-189671	19980619
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OTHER SOURCE(S): MARPAT 132:85856
 ED Entered STN: 14 Jan 2000
 GI

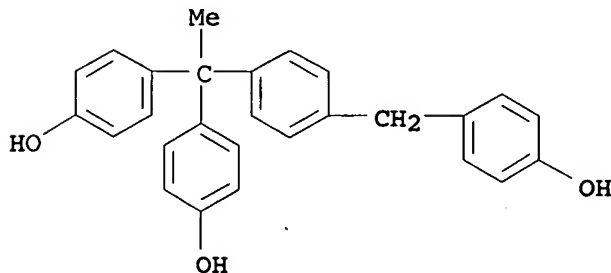


AB The comps. contain (A) alkaline-soluble novolak resin and (B) quinonediazide sulfonic acid ester of polyphenols (I; R = H, alkyl; A = CH₂CH₂, m-CH₂C₆H₄CH₂; m = 1-3; n = 0-3). The comps. are especially useful as pos. **resists**, sensitive against UV and far UV, used in LSI fabrication. The comps. can be uniformly applied onto large-sized substrates, and have high resolution, excellent pattern crosscut section characteristics, and exposure margin.

IT 143016-47-1DP, reaction products with 1,2-Naphthoquinonediazido-5-sulfonyl chloride (alkaline-soluble novolak resins and polyphenol quinonediazide sulfonate as (far) UV-sensitive pos. **resists** for fabrication of LSI)

RN 143016-47-1 HCAPLUS

CN Phenol, 4,4'-[1-[4-[(4-hydroxyphenyl)methyl]phenyl]ethylidene]bis-(9CI) (CA INDEX NAME)



IC ICM G03F007-004
ICS C08K005-42; C08L061-06; G03F007-039

CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 38

ST UV sensitive **photoresist** LSI fabrication; far UV sensitive **photoresist** LSI fabrication; alk sol novolak resin pos **photoresist**; polyphenol quinonediazide sulfonate novolak pos **photoresist**

IT Electronic device fabrication
(LSI; alkaline-soluble novolak resins and polyphenol quinonediazide sulfonate as (far) UV-sensitive pos. **resists** for fabrication of LSI)

IT Positive **photoresists**
(UV; alkaline-soluble novolak resins and polyphenol quinonediazide sulfonate as (far) UV-sensitive pos. **resists** for fabrication of LSI)

IT Integrated circuits
(alkaline-soluble novolak resins and polyphenol quinonediazide sulfonate as (far) UV-sensitive pos. **resists** for fabrication of LSI)

IT Phenolic resins, uses
(novolak, alkaline-soluble; alkaline-soluble novolak resins and polyphenol quinonediazide sulfonate as (far) UV-sensitive pos. **resists** for fabrication of LSI)

IT Phenols, uses
(polyphenols, nonpolymeric, esters; alkaline-soluble novolak resins and polyphenol quinonediazide sulfonate as (far) UV-sensitive pos. **resists** for fabrication of LSI)

IT **Resists**
(pos.-working radiation-sensitive; alkaline-soluble novolak resins and polyphenol quinonediazide sulfonate as (far) UV-sensitive pos. **resists** for fabrication of LSI)

IT 3770-97-6DP, 1,2-Naphthoquinonediazido-5-sulfonyl chloride, esters with polyphenols 59932-82-0P, m-Cresol-formaldehyde-3,4-xylene copolymer 143016-47-1DP, reaction products with 1,2-Naphthoquinonediazido-5-sulfonyl chloride 144595-69-7P 144595-70-0P 161261-16-1P 167094-72-6DP, reaction products with 1,2-Naphthoquinonediazido-5-sulfonyl chloride 221471-83-6DP, reaction products with 1,2-Naphthoquinonediazido-5-sulfonyl chloride 254099-37-1DP, reaction products with 1,2-Naphthoquinonediazido-5-sulfonyl chloride 254099-38-2DP, reaction products with 1,2-Naphthoquinonediazido-5-sulfonyl chloride
(alkaline-soluble novolak resins and polyphenol quinonediazide sulfonate as (far) UV-sensitive pos. **resists** for fabrication of LSI)

L61 ANSWER 20 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1999:564113 HCAPLUS
DOCUMENT NUMBER: 131:305040
TITLE: Intramolecular Singlet-Singlet and Triplet-Triplet Energy Transfer in Adamantyl-Linked Trichromophores
AUTHOR(S): Tan, Z.; Kote, R.; Samaniego, W. N.; Weininger, S. J.; McGimpsey, W. G.
CORPORATE SOURCE: Department of Chemistry and Biochemistry, Worcester Polytechnic Institute, Worcester, MA, 01609, USA
SOURCE: Journal of Physical Chemistry A (1999),

103(38), 7612-7620

CODEN: JPCAFH; ISSN: 1089-5639

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 08 Sep 1999

AB Intramol. singlet-singlet energy transfer (SSET) has been observed in 4-(3-(x-phenanthryl)-1-adamantyl)-4'-(3-(2-naphthyl)-1-adamantyl)biphenyl (3), a trichromophoric mol. consisting of phenanthrene, biphenyl, and naphthalene groups linked sequentially by adamantane bridges in which chromophore attachment is at the tertiary 1- and 3-adamantyl positions. UV-visible absorption, steady-state and time-resolved fluorescence, low-temperature phosphorescence and

room-temperature

laser flash photolysis measurements indicate that efficient SSET takes place with equal probability from the central biphenyl group to each of the terminal chromophores with a rate constant, $k > 6 \times 10^{10} \text{ s}^{-1}$. Slower SSET from the naphthyl chromophore to the phenanthryl group occurs with a rate constant $k \text{ approx. } 9 \times 10^6 \text{ s}^{-1}$. The exptl. determined SSET efficiency and a calcn. of the critical Foerster distance, when combined with mol. modeling, indicate that a Foerster mechanism is sufficient to account for the observed SSET process. Intramol. triplet-triplet energy transfer (TTET) from the phenanthryl group to the naphthyl chromophore appears to occur by a slow, thermally activated transfer step from the phenanthrene ring to the central biphenyl group followed by rapid exergonic transfer to the naphthyl group. TTET in the reverse direction involving thermal activation of the naphthyl triplet also apparently may take place.

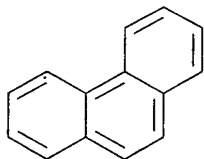
IT 247040-44-4P

(photoinduced intramol. singlet-singlet and triplet-triplet energy transfer in trichromophore mol. containing phenanthrene and biphenyl and naphthalene groups linked sequentially by adamantane bridges)

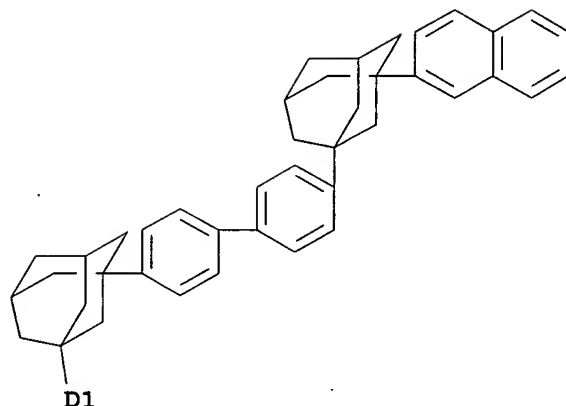
RN 247040-44-4 HCAPLUS

CN Tricyclo[3.3.1.1^{3,7}]decane, 1-(2-naphthalenyl)-3-[4'-(3-[2(or 3)-phenanthrenyl]tricyclo[3.3.1.1^{3,7}]dec-1-yl)[1,1'-biphenyl]-4-yl]- (9CI) (CA INDEX NAME)

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CC 74-1 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 22

IT 247040-44-4P

(photoinduced intramol. singlet-singlet and triplet-triplet energy transfer in trichromophore mol. containing phenanthrene and biphenyl and naphthalene groups linked sequentially by adamantane bridges)

REFERENCE COUNT: 59 THERE ARE 59 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L61 ANSWER 21 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1999:281610 HCAPLUS

DOCUMENT NUMBER: 131:74049

TITLE: Synthesis and properties of new adamantane-based poly(ether imide)s

AUTHOR(S): Hsiao, Sheng-Huei; Lee, Ching-Tang; Chern, Yaw-Terng

CORPORATE SOURCE: Dep. Chemical Eng., Tatung Institute Technology, Taipei, Peop. Rep. China

SOURCE: Journal of Polymer Science, Part A: Polymer Chemistry (1999), 37(11), 1619-1628
CODEN: JPACEC; ISSN: 0887-624X

PUBLISHER: John Wiley & Sons, Inc.

DOCUMENT TYPE: Journal

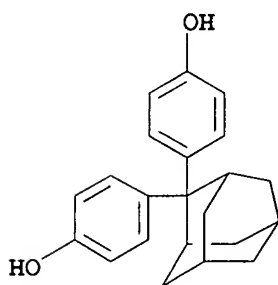
LANGUAGE: English

ED Entered STN: 07 May 1999

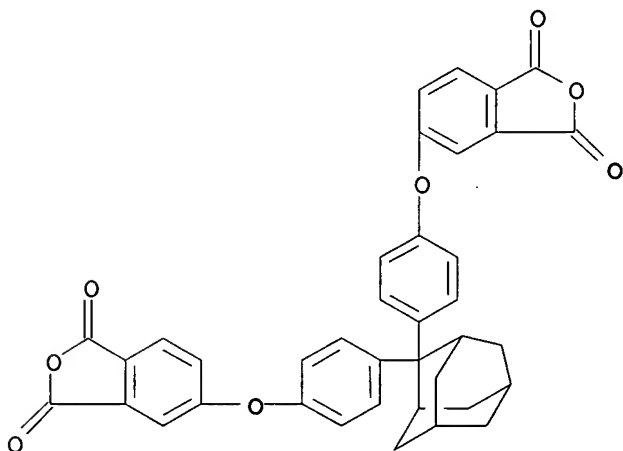
AB A new adamantane-based bis(ether anhydride), 2,2-bis[4-(3,4-dicarboxyphenoxy)phenyl]adamantane dianhydride, was prepared in 3 steps starting from nitro-displacement of 4-nitrophthalonitrile with the K phenolate of 2,2-bis(4-hydroxyphenyl)adamantane. A series of adamantane-containing poly(ether imides) was prepared from the adamantane-based bis(ether anhydride) and aromatic diamines by a conventional two-stage synthesis in which the poly(ether amic acids) obtained in the first stage were heated stage-by-stage at 150-270°C to give the poly(ether imides). The intermediate poly(ether amic acids) had inherent viscosities between 0.56 and 1.92 dL/g. Except for those from p-phenylenediamine, m-phenylenediamine, and benzidine, all the poly(ether amic acid) films could be thermally converted into transparent, flexible, and tough poly(ether imide) films. All the poly(ether imides) showed limited solubility in organic

solvents, although they were amorphous in nature as evidenced by X-ray diffractograms. Glass transition temps. of these poly(ether imides) were recorded in the range of 242-317°C by differential scanning calorimetry and of 270-322°C by dynamic mech. anal. They exhibited high **resistance** to thermal degradation, with 10% weight loss temps. being recorded between 514-538°C in nitrogen and 511-527°C in air.

IT 52211-74-2P, 2,2-Bis(4-hydroxyphenyl)adamantane
(in preparation of bis[(dicarboxyphenoxy)phenyl]adamantane dianhydride monomer)
RN 52211-74-2 HCAPLUS
CN Phenol, 4,4'-tricyclo[3.3.1.1^{3,7}]decylidenebis- (CA INDEX NAME)



IT 215094-06-7P
(preparation and polymerization with aromatic diamines)
RN 215094-06-7 HCAPLUS
CN 1,3-Isobenzofurandione, 5,5'-[tricyclo[3.3.1.1^{3,7}]decylidenebis(4,1-phenyleneoxy)]bis- (9CI) (CA INDEX NAME)



CC 35-5 (Chemistry of Synthetic High Polymers)
ST adamantane polyether polyimide prepn property; glass temp adamantane polyether polyimide; heat **resistance** adamantane polyether polyimide
IT Bond angle
Bond length
Glass transition temperature
Heat-resistant materials
(preparation and properties of adamantane-based poly(ether imides))

IT 52211-74-2P, 2,2-Bis(4-hydroxyphenyl)adamantane
228396-86-9P, 2,2-Bis[4-(3,4-dicyanophenoxy)phenyl]adamantane
(in preparation of bis[(dicarboxyphenoxy)phenyl]adamantane dianhydride monomer)

IT 215094-06-7P
(preparation and polymerization with aromatic diamines)

REFERENCE COUNT: 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR
THIS RECORD. ALL CITATIONS AVAILABLE IN THE
RE FORMAT

L61 ANSWER 22 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1999:244141 HCAPLUS

DOCUMENT NUMBER: 131:11450

TITLE: Laser flash photolysis of 3-noradamantyl(phenyl)diazomethane: generation, detection and kinetics of 2-phenyladamantene
AUTHOR(S): Hirai, Katsuyuki; Tomioka, Hideo; Okazaki, Takao; Tokunaga, Kazuhiko; Kitagawa, Toshikazu; Takeuchi, Ken'ichi

CORPORATE SOURCE: Chemistry Department for Materials, Faculty of Engineering, Mie University, Mie, 514, Japan

SOURCE: Journal of Physical Organic Chemistry (1999), 12(2), 165-169

CODEN: JPOCEE; ISSN: 0894-3230

PUBLISHER: John Wiley & Sons Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

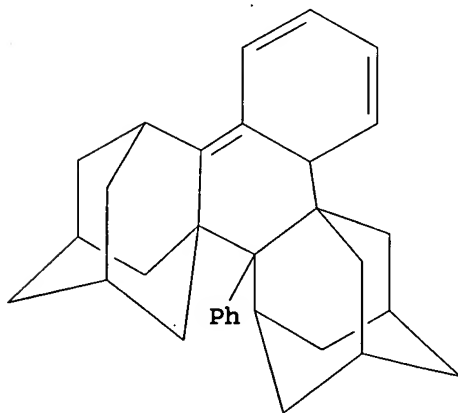
ED Entered STN: 21 Apr 1999

AB Laser flash photolysis of 3-noradamantyl(phenyl)diazomethane in degassed benzene at room temperature generates 2-phenyladamantene, which decays with second-order kinetics ($2k/\epsilon l = 1.5 \times 10^2$ s⁻¹) to give a dimer and is shown to react with oxygen and tri(n-butyl)tin hydride much faster than with methanol, thus revealing profound radical character of the twisted double bond.

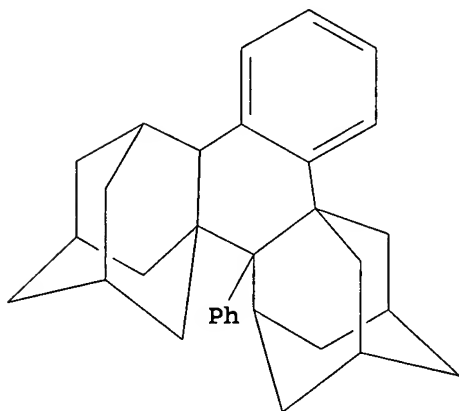
IT 225915-82-2P 225915-83-3P
(photoproduct; reaction kinetics of phenyladamantene produced in photolysis of 3-noradamantyl(phenyl)diazomethane in degassed benzene at room temperature)

RN 225915-82-2 HCAPLUS

CN 5H,11H-4b,8:6,10:10b,14:12,16-Tetramethanodicycloocta[a,c]naphthalene, 4a,6,7,8,9,10,10a,12,13,14,15,16-dodecahydro-10a-phenyl- (9CI) (CA INDEX NAME)

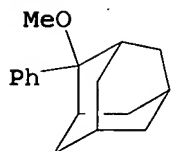


RN 225915-83-3 HCAPLUS
 CN 5H,11H-4b,8:6,10:10b,14:12,16-Tetramethanodicycloocta[a,c]naphthalene,
 6,7,8,9,10,10a,12,13,14,15,16,16a-dodecahydro-10a-phenyl- (9CI) (CA
 INDEX NAME)



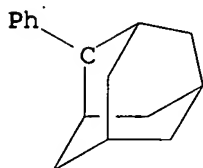
IT 225915-84-4P
 (photoproduct; reaction kinetics of phenyladamantene produced in
 photolysis of 3-noradamantyl(phenyl)diazomethane in degassed
 benzene at room temperature in presence of methanol)

RN 225915-84-4 HCAPLUS
 CN Tricyclo[3.3.1.1^{3,7}]decane, 2-methoxy-2-phenyl- (CA INDEX NAME)



IT 186597-63-7P
 (photoproduct; reaction kinetics of phenyladamantene produced in
 photolysis of 3-noradamantyl(phenyl)diazomethane in degassed
 benzene at room temperature in presence of tri(n-butyl)tin hydride)

RN 186597-63-7 HCAPLUS
 CN Tricyclo[3.3.1.1^{3,7}]dec-2-yl, 2-phenyl- (9CI) (CA INDEX NAME)



CC 74-1 (Radiation Chemistry, Photochemistry, and Photographic
 and Other Reprographic Processes)

IT 225915-82-2P 225915-83-3P
 (photoproduct; reaction kinetics of phenyladamantene produced in

photolysis of 3-noradamantyl(phenyl)diazomethane in degassed benzene at room temperature)

IT 225915-84-4P 225915-85-5P
(photoproduct; reaction kinetics of phenyladamantene produced in photolysis of 3-noradamantyl(phenyl)diazomethane in degassed benzene at room temperature in presence of methanol)

IT 186597-63-7P
(photoproduct; reaction kinetics of phenyladamantene produced in photolysis of 3-noradamantyl(phenyl)diazomethane in degassed benzene at room temperature in presence of tri(n-butyl)tin hydride)

REFERENCE COUNT: 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L61 ANSWER 23 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1998:576608 HCAPLUS

DOCUMENT NUMBER: 129:204011

TITLE: Epoxy resin compositions with moisture and solder heat **resistance** and semiconductor devices sealed with the compositions

INVENTOR(S): Yamamoto, Isao

PATENT ASSIGNEE(S): Toshiba Chemical Corp., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10231352	A	19980902	JP 1997-49857	19970218
			<--	
PRIORITY APPLN. INFO.:			JP 1997-49857	19970218
			<--	

ED Entered STN: 10 Sep 1998

GI

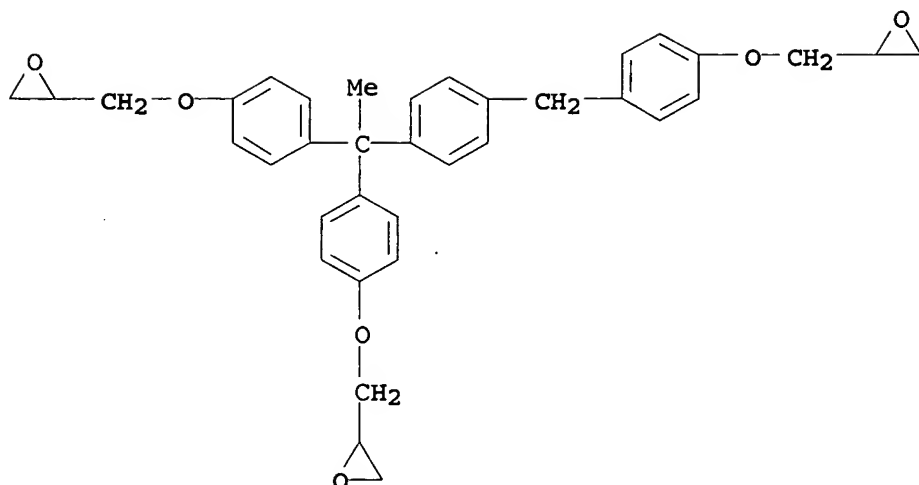
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Title compns. are composed of (a) polyfunctional epoxy resins I (R = alkyl; $n \geq 0$), (B) terpene-modified phenolic resins II (R = alkyl; $n \geq 0$), (C) 25-93% inorg. fillers, and (D) curing accelerators. Semiconductor chips are sealed with the compns. to give title devices. Thus, I 6.2, II (R = Me, $n = 0$) 4.8, SiO₂ powder 88, curing accelerator 0.3, ester wax 0.3, and silane coupling agent 0.4% were mixed to give a molding material showing water absorption 0.30%, glass transition temperature 170°, bending strength (JIS-K-6911) 14.0 kg/mm² (at room temperature) and 2.5 kg/mm² (at 220°), and good solder heat, moisture, and crack **resistance**.

IT 212246-62-3DP, alkyl derivs., polymers
(crosslinked with terpene-modified phenolic resin; epoxy resin compns. with moisture and solder heat **resistance** as sealants for semiconductor devices)

RN 212246-62-3 HCAPLUS

CN Oxirane, 2,2'-[[1-[4-[[4-(oxiranylmethoxy)phenyl]methyl]phenyl]ethylidene]bis(4,1-phenyleneoxymethylene)]bis- (9CI) (CA INDEX NAME)



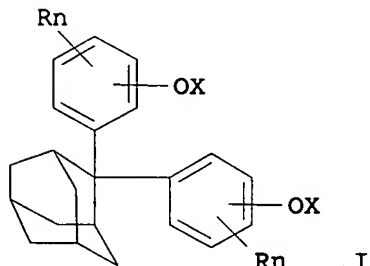
- IC ICM C08G059-32
ICS C08G059-62; C08K003-00; C08K003-36; C08L063-00; H01L023-29;
H01L023-31
- CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 37, 76
- ST epoxy resin semiconductor device sealing; moisture **resistance**
epoxy resin semiconductor sealing; solder heat **resistance**
epoxy resin semiconductor; terpene phenolic resin epoxy semiconductor
sealing; inorg filler epoxy resin semiconductor sealing
- IT Epoxy resins, uses
(crosslinked with terpene-modified phenolic resin; epoxy resin
compns. with moisture and solder heat **resistance** as
sealants for semiconductor devices)
- IT Electronic packaging materials
Heat-resistant materials
Semiconductor devices
Water-resistant materials
(epoxy resin compns. with moisture and solder heat
resistance as sealants for semiconductor devices)
- IT Fillers
(inorg.; epoxy resin compns. with moisture and solder heat
resistance as sealants for semiconductor devices)
- IT Phenolic resins, uses
(novolak, crosslinking agents; epoxy resin compns. with moisture
and solder heat **resistance** as sealants for semiconductor
devices)
- IT Phenolic resins, uses
(terpenoid, crosslinking agents; epoxy resin compns. with moisture
and solder heat **resistance** as sealants for semiconductor
devices)
- IT 212246-62-3DP, alkyl derivs., polymers
(crosslinked with terpene-modified phenolic resin; epoxy resin
compns. with moisture and solder heat **resistance** as
sealants for semiconductor devices)
- IT 57047-75-3
(crosslinking agents; epoxy resin compns. with moisture and solder
heat **resistance** as sealants for semiconductor devices)
- IT 7631-86-9, Silica, uses
(filler; epoxy resin compns. with moisture and solder heat

resistance as sealants for semiconductor devices)

L61 ANSWER 24 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1998:314774 HCAPLUS
 DOCUMENT NUMBER: 129:28745
 TITLE: Bis(hydroxyphenyl)adamantanes, epoxy compounds, epoxy resin compositions, and electronic device packaging compositions thereof
 INVENTOR(S): Hasegawa, Yoshikazu; Shimamura, Yoshio; Kogo, Makiko
 PATENT ASSIGNEE(S): Nippon Kayaku Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10130371	A	19980519	JP 1996-305514	19961101
			<--	
PRIORITY APPLN. INFO.:			JP 1996-305514	19961101
			<--	

OTHER SOURCE(S): MARPAT 129:28745
 ED Entered STN: 28 May 1998
 GI



AB The bis(hydroxyphenyl)adamantanes have the structure I (X = H, glycidyl; when X is H, R do not contain glycidyloxy; when X is glycidyl, R do not contain OH; R = alkyl, alkylene, aralkyl, aryl, halogen, alkoxy, OH, glycidyloxy; n = 0-4). The adamantanes give polymers having excellent heat resistance, thermal conductivity, n., elec. properties, etc. Their derivative epoxy resin compns. and the packaging compns. are also claimed. Thus, reacting 50 g 2-adamantanone and 150 g PhOH in HCl at 80° gave 25.3 g white crystal of 2,2-bis(4'-hydroxyphenyl)adamantane with m.p. 321°, 14 g of which was reacted with 32.4 g epichlorohydrin to give 17.1 g white crystal of 2,2-bis(4'-glycidyloxyphenyl)adamantane (II) with m.p. 160°, epoxy equiv 217, and Abbe number at 25° 1.6. A mixture of II 1, a novolak 0.45, and PPh₃ 0.01 g was cured at 180° and crushed to give pellets showing Tg 185°.

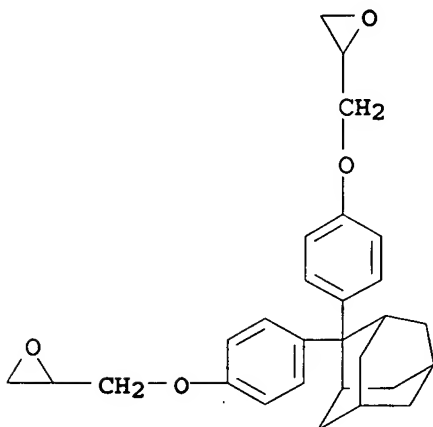
IT 56323-07-0P

(bis(hydroxyphenyl)adamantanes for epoxy compound precursors and

their heat-resistant compns. and electronic device packagings)

RN 56323-07-0 HCAPLUS

CN Oxirane, 2,2'-[tricyclo[3.3.1.1^{3,7}]decylidenebis(4,1-phenyleneoxymethylene)]bis- (CA INDEX NAME)

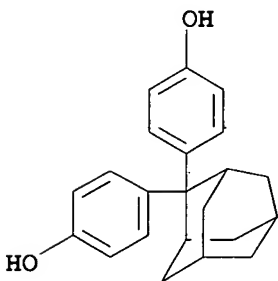


IT 52211-74-2P

(bis(hydroxyphenyl)adamantanes for epoxy compound precursors and their heat-resistant compns. and electronic device packagings)

RN 52211-74-2 HCAPLUS

CN Phenol, 4,4'-tricyclo[3.3.1.1.3,7]decylidenebis- (CA INDEX NAME)



IC ICM C08G059-26

ICS C08G059-62; C09K003-10

CC 37-6 (Plastics Manufacture and Processing)

Section cross-reference(s): 25, 35, 38, 76

IT Electronic packaging materials

Heat-resistant materials

(bis(hydroxyphenyl)adamantanes for epoxy compound precursors and their heat-resistant compns. and electronic device packagings)

IT Epoxy resins, preparation

(bis(hydroxyphenyl)adamantanes for epoxy compound precursors and their heat-resistant compns. and electronic device packagings)

IT Phenolic resins, properties

(novolak; bis(hydroxyphenyl)adamantanes for epoxy compound precursors and their heat-resistant compns. and electronic device

packagings)
 IT 56323-07-0P
 (bis(hydroxyphenyl)adamantanes for epoxy compound precursors and
 their heat-resistant compns. and electronic device
 packagings)
 IT 52211-74-2P
 (bis(hydroxyphenyl)adamantanes for epoxy compound precursors and
 their heat-resistant compns. and electronic device
 packagings)
 IT 106-89-8, Epichlorohydrin, reactions
 (bis(hydroxyphenyl)adamantanes for epoxy compound precursors and
 their heat-resistant compns. and electronic device
 packagings)

L61 ANSWER 25 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1997:34103 HCAPLUS

DOCUMENT NUMBER: 126:67524

TITLE: Positive-working radiation-sensitive resin
 composition

INVENTOR(S): Kawabe, Yasumasa; Yamanaka, Tsukasa

PATENT ASSIGNEE(S): Fuji Photo Film Co Ltd, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 32 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08262719	A	19961011	JP 1995-66322	19950324

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PRIORITY APPLN. INFO.: JP 1995-66322 19950324

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ED Entered STN: 17 Jan 1997

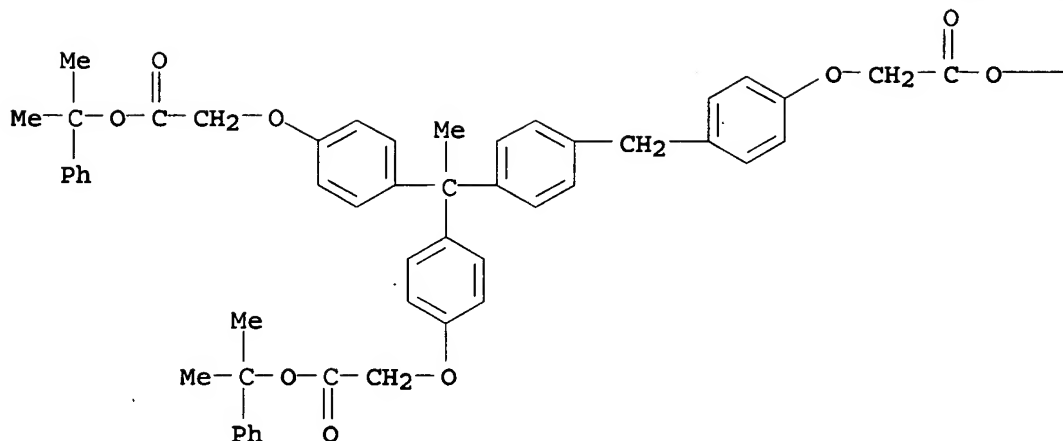
AB The composition comprises (A) an alkali-soluble resin, (B) an acid generator,
 (C) an acid-decomposable dissoln. inhibitor of which the solubility
 increases by acids, and (D) propylene glycol monoalkyl ether
 propionate. The composition comprises (A) a resin with acid decomposable
 group and of which the solubility in alkali developer increases by acids,
 (B), and (D). The composition comprises (A) an alkali-soluble resin, (B) an
 acid generator (except 1,2-naphthoquinonediazide), and (D). The
 composition is nontoxic and shows good coatability, storage stability, high
 sensitivity and resolution

IT 185107-57-7P
 (dissoln. inhibitor; pos.-working radiation-sensitive resin composition
 containing propylene glycol monoalkyl ether propionate as solvent)

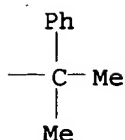
RN 185107-57-7 HCAPLUS

CN Acetic acid, 2,2'-[[1-[4-[[4-[2-(1-methyl-1-phenylethoxy)-2-
 oxoethoxy]phenyl]methyl]phenyl]ethylidene]bis(4,1-phenyleneoxy)]bis-,
 bis(1-methyl-1-phenylethyl) ester (9CI) (CA INDEX NAME)

PAGE 1-A



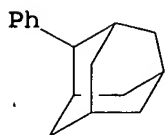
PAGE 1-B



- IC ICM G03F007-039
ICS G03F007-00; G03F007-004; G03F007-028; G03F007-033; H01L021-027
- CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 37
- ST pos working radiation sensitive **resist**; toxic radiation sensitive **resist** compn; propylene glycol alkyl ether propionate **resist**
- IT **Resists**
(pos.-working radiation-sensitive; pos.-working radiation-sensitive resin composition containing propylene glycol monoalkyl ether propionate as solvent)
- IT 153698-58-9P 153698-65-8P 153698-68-1P 153698-70-5P
153840-05-2P 185107-57-7P 185107-58-8P
(dissoln. inhibitor; pos.-working radiation-sensitive resin composition containing propylene glycol monoalkyl ether propionate as solvent)
- IT 96839-34-8P, 2,6-Dinitrobenzyl alcohol
(preparation of acid generator for **resist** composition)
- IT 85-46-1, α -Naphthalenesulfonyl chloride 87-66-1, Pyrogallol
98-59-9, p-Toluenesulfonyl chloride 124-63-0, Methanesulfonyl chloride 606-31-5, 2,6-Dinitrobenzaldehyde 824-79-3, Sodium p-toluenesulfinate 825-52-5 1569-69-3, Cyclohexylthiol 29256-75-5 67580-39-6, Sodium 9,10-dimethoxyanthracene-2-sulfonate 75007-13-5, Diphenyliodonium perchlorate
(preparation of acid generator for **resist** composition)
- IT 110-87-2, 3,4-Dihydro-2H-pyran 4466-18-6 5292-43-3, tert-Butyl bromoacetate 24424-99-5, Di-tert-butyl dicarbonate 76937-83-2, $\alpha, \alpha, \alpha', \alpha', \alpha', \alpha'$ -Hexakis(4-hydroxyphenyl)-1,3,5-triethylbenzene 110726-28-8 153698-47-6
(preparation of dissoln. inhibitor for **resist** composition)

L61 ANSWER 26 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1995:655936 HCAPLUS
DOCUMENT NUMBER: 123:183137
TITLE: Triplet energy accepting properties of styrenes:
examination of the relationship between the degree
of "non-vertical" behavior and the magnitude of a
specific single-bond torsional angle
AUTHOR(S): Davies, M. K.; Gorman, A. A.; Hamblett, I.; Unett,
D. J.
CORPORATE SOURCE: Department of Chemistry, University of Manchester,
Manchester, M13 9PL, UK
SOURCE: Journal of Photochemistry and Photobiology, A:
Chemistry (1995), 88(1), 5-9
CODEN: JPPCEJ; ISSN: 1010-6030
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 05 Jul 1995
AB The triplet energy accepting properties of phenylethene (styrene),
2-methyl-1-phenylpropene and phenyladamantylidene have been examined It
is shown that the degree of "non-vertical" behavior, i.e. the donor
triplet energy range over which non-classical behavior is observed,
increases with the degree of torsion about the formal single bond
between two adjacent components of a conjugated π system. The
result strongly supports the contention that the key to "non-vertical"
behavior, as it applies to conjugated π systems, is torsion about
formal single bonds on the ground state surface.
IT 19066-24-1
(triplet energy acceptance in relation to degree of nonvertical
behavior and magnitude of specific single-bond torsional angle)
RN 19066-24-1 HCAPLUS
CN Tricyclo[3.3.1.1^{3,7}]decane, 2-phenyl- (9CI) (CA INDEX NAME)



CC 74-1 (Radiation Chemistry, Photochemistry, and Photographic
and Other Reprographic Processes)
IT 100-42-5, Styrene, properties 768-49-0, 2-Methyl-1-phenylpropene
19066-24-1
(triplet energy acceptance in relation to degree of nonvertical
behavior and magnitude of specific single-bond torsional angle)

L61 ANSWER 27 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1995:385953 HCAPLUS
DOCUMENT NUMBER: 122:147304
TITLE: Photodefinable polymers containing
perfluorocyclobutane groups
INVENTOR(S): Babb, David A.; Richey, W. Frank; Clement,
Katherine S.; Moyer, Eric S.; Sorenson, Marius W.
PATENT ASSIGNEE(S): Dow Chemical Co., USA
SOURCE: PCT Int. Appl., 75 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9415258	A1	19940707	WO 1993-US11562	19931201
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W: CA, JP, KR				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 5426164	A	19950620	US 1992-996452	19921224
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CA 2151151	A1	19940707	CA 1993-2151151	19931201
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EP 676062	A1	19951011	EP 1994-902456	19931201
<--				
R: BE, DE, FR, GB, IT, NL				
JP 08505168	T	19960604	JP 1993-515164	19931201
<--				
US 5489623	A	19960206	US 1995-428740	19950425
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PRIORITY APPLN. INFO.:			US 1992-996452	A 19921224
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			WO 1993-US11562	W 19931201
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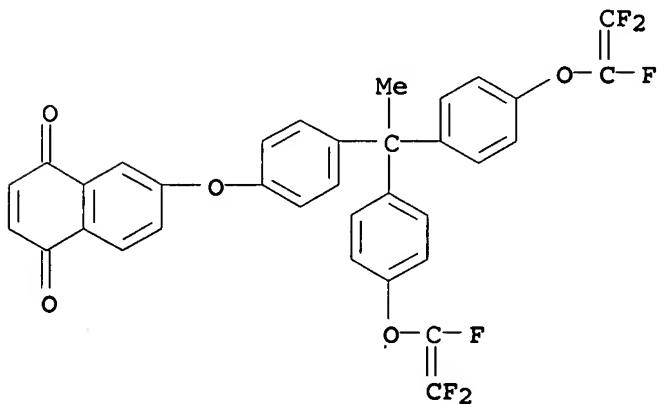
ED Entered STN: 03 Mar 1995

AB The title polymer has ≥ 1 photoactive site and > 1 perfluorocyclobutane group. New monomers containing photoactive sites or photoactive precursors and ≥ 1 perfluorovinyl group are useful for making such polymers. Processes of making such polymers and the monomers from which they are made are disclosed. The polymers are useful in coatings, photoresists, and other photoactive applications.

IT 161250-87-9, 6-(4-(1,1-Bis(4-trifluoroethenyloxyphenyl)ethyl)phenoxy)naphthoquinone 161250-88-0, 6-(4-(1,1-Bis(4-trifluoroethenyloxyphenyl)ethyl)phenoxy)coumarin 161250-89-1, 7-(4-(1,1-Bis(4-trifluoroethenyloxyphenyl)ethyl)phenoxy)coumarin 161250-91-5, 2-(4-(4-(1,1-Bis(trifluoroethenyloxyphenyl)ethyl)phenoxy)benzylidene)cyclohexanone (monomer for photodefinable polymer)

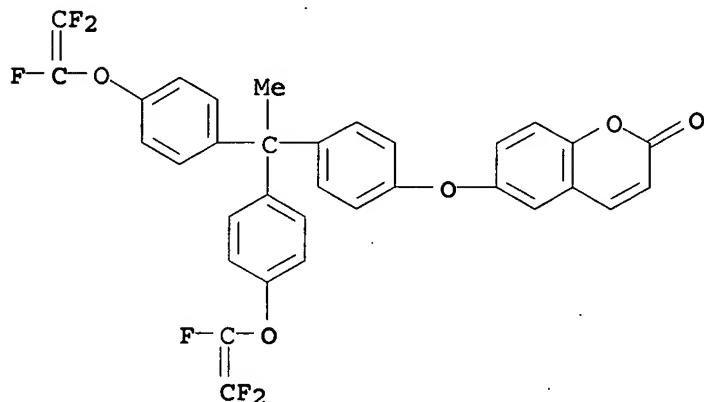
RN 161250-87-9 HCAPLUS

CN 1,4-Naphthalenedione, 6-[4-[1,1-bis[4-[(trifluoroethenyl)oxy]phenyl]ethyl]phenoxy]-(9CI) (CA INDEX NAME)



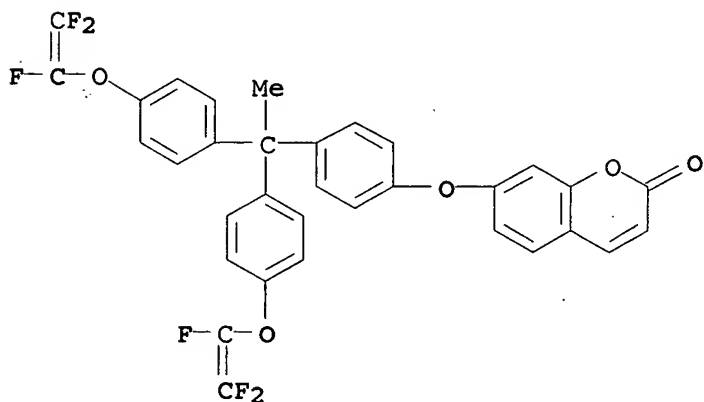
RN 161250-88-0 HCAPLUS

CN 2H-1-Benzopyran-2-one, 6-[4-[1,1-bis[4-[(trifluoroethenyl)oxy]phenyl]ethyl]phenoxy] - (9CI) (CA INDEX NAME)



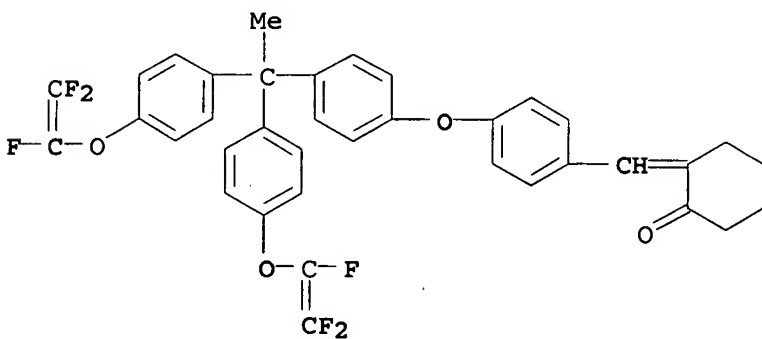
RN 161250-89-1 HCAPLUS

CN 2H-1-Benzopyran-2-one, 7-[4-[1,1-bis[4-[(trifluoroethenyl)oxy]phenyl]ethyl]phenoxy] - (9CI) (CA INDEX NAME)



RN 161250-91-5 HCAPLUS

CN Cyclohexanone, 2-[[4-[4-[1,1-bis[4-[(trifluoroethenyl)oxy]phenyl]ethyl]phenoxy]phenyl]methylene] - (9CI) (CA INDEX NAME)



IC ICM G03F007-004
ICS C07C043-17; C08F016-32

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 35

ST photodefinable polymer perfluorocyclobutane group photoresist

IT **Resists**
(photo-, photodefinable polymers containing perfluorocyclobutane groups)

IT 161249-96-3 161249-98-5 161249-99-6 161250-00-6,
β-(4-Hydroxybenzylidene)-4-(trifluoroethenyloxy)acetophenone
161250-01-7, β-(4-Acetylbenzylidene)-4-
(trifluoroethenyloxy)acetophenone 161250-02-8, β-(4-
Acetyloxybenzylidene)-4-(trifluoroethenyloxy)acetophenone
161250-03-9, β-(4-Aminobenzylidene)-4-
(trifluoroethenyloxy)acetophenone 161250-04-0, β-(4-
Carboxybenzylidene)-4-(trifluoroethenyloxy)acetophenone 161250-05-1,
β-(4-Isocyanatobenzylidene)-4-(trifluoroethenyloxy)acetophenone
161250-06-2, β-(4-Chlorocarboxybenzylidene)-4-
(trifluoroethenyloxy)acetophenone 161250-07-3, β-(4-
Carboxymethylbenzylidene)-4-(trifluoroethenyloxy)acetophenone
161250-08-4, β-(4-Carboxyethylbenzylidene)-4-
(trifluoroethenyloxy)acetophenone 161250-09-5, 4-Hydroxy-β-(4-
trifluoroethenyloxybenzylidene)acetophenone 161250-10-8,
4-Amino-β-(4-trifluoroethenyloxybenzylidene)acetophenone
161250-11-9, 4-Carboxy-β-(4-trifluoroethenyloxybenzylidene)acetop
henone 161250-12-0, 4-Chlorocarboxy-β-(4-
trifluoroethenyloxybenzylidene)acetophenone 161250-13-1,
4-Isocyanato-β-(4-trifluoroethenyloxybenzylidene)acetophenone
161250-14-2, 4-Carboxymethyl-β-(4-trifluoroethenyloxybenzylidene)
acetophenone 161250-15-3 161250-16-4, 1-(4-Hydroxyphenyl)-2-(4-
trifluoroethenyloxyphenyl)-1-propene 161250-17-5,
2-(4-Hydroxyphenyl)-1-(4-trifluoroethenyloxyphenyl)-1-propene
161250-18-6, 1-(4-Aminophenyl)-2-(4-trifluoroethenyloxyphenyl)-1-
propene 161250-19-7, 2-(4-Aminophenyl)-1-(4-
trifluoroethenyloxyphenyl)-1-propene 161250-20-0,
1-(4-Carboxyphenyl)-2-(4-trifluoroethenyloxyphenyl)-1-propene
161250-21-1, 2-(4-Carboxyphenyl)-1-(4-trifluoroethenyloxyphenyl)-1-
propene 161250-22-2, 1-(4-Chlorocarboxyphenyl)-2-(4-
trifluoroethenyloxyphenyl)-1-propene 161250-23-3,
2-(4-Chlorocarboxyphenyl)-1-(4-trifluoroethenyloxyphenyl)-1-propene
161250-24-4, 1-(4-Isocyanatophenyl)-2-(4-trifluoroethenyloxyphenyl)-1-
propene 161250-25-5, 2-(4-Isocyanatophenyl)-1-(4-
trifluoroethenyloxyphenyl)-1-propene 161250-26-6,
1-(4-Carboxymethylphenyl)-2-(4-trifluoroethenyloxyphenyl)-1-propene
161250-27-7 161250-28-8, 4-Hydroxy-4'-trifluoroethenyloxystilbene
161250-29-9, 4-Aminophenyl-4'-trifluoroethenyloxystilbene
161250-30-2, 4-Carboxyphenyl-4'-trifluoroethenyloxystilbene
161250-31-3, 4-Isocyanato-4'-trifluoroethenyloxystilbene
161250-32-4, 4-Carboxymethylphenyl-4'-trifluoroethenyloxystilbene
161250-33-5, 5-Hydroxy-8-trifluoroethenyloxynaphthoquinone
161250-34-6, 1-(4-Hydroxyphenyl)-5-(4-trifluoroethenyloxyphenyl)-1,4-
pentadien-3-one 161250-35-7, 1-(4-Aminophenyl)-5-(4-
trifluoroethenyloxyphenyl)-1,4-pentadien-3-one 161250-36-8,
1-(4-Carboxyphenyl)-5-(4-trifluoroethenyloxyphenyl)-1,4-pentadien-3-
one 161250-37-9 161250-38-0, 1-(4-Isocyanatophenyl)-5-(4-
trifluoroethenyloxyphenyl)-1,4-pentadien-3-one 161250-39-1,
5-Hydroxy-8-trifluoroethenyloxy coumarin 161250-40-4,
8-Hydroxy-5-trifluoroethenyloxy coumarin 161250-41-5,

5-Amino-8-trifluoroethenyloxy coumarin 161250-42-6,
 8-Amino-5-trifluoroethenyloxy coumarin 161250-43-7,
 5-Isocyanato-8-trifluoroethenyloxy coumarin 161250-44-8,
 8-Isocyanato-5-trifluoroethenyloxy coumarin 161250-45-9,
 2-(4-Hydroxybenzylidene)-6-(4-trifluoroethenyloxybenzylidene)cyclohexa
 none 161250-46-0, 2-(4-Hydroxybenzylidene)-6-(4-
 trifluoroethenyloxybenzylidene)-4-methylcyclohexanone 161250-47-1,
 2-(4-Aminobenzylidene)-6-(4-trifluoroethenyloxybenzylidene)cyclohexano
 ne 161250-48-2, 2-(4-Aminobenzylidene)-6-(4-
 trifluoroethenyloxybenzylidene)-4-methylcyclohexanone 161250-49-3,
 2-(4-Carboxymethylbenzylidene)-6-(4-trifluoroethenyloxybenzylidene)cyc
 lohexanone 161250-50-6, 2-(4-Carboxymethylbenzylidene)-6-(4-
 trifluoroethenyloxybenzylidene)-4-methylcyclohexanone 161250-51-7,
 2-(4-Isocyanatobenzylidene)-5-(4-trifluoroethenyloxybenzylidene)cycloh
 exanone 161250-52-8, 2-(4-Isocyanatobenzylidene)-6-(4-
 trifluoroethenyloxybenzylidene)-4-methylcyclohexanone 161250-53-9
 161250-54-0, 2-(4-Chlorocarboxybenzylidene)-6-(4-
 trifluoroethenyloxybenzylidene)-4-methylcyclohexanone 161250-55-1,
 1-(4-Acroyloxyphenyl)-1,1-bis(4-trifluoroethenyloxyphenyl)ethane
 161250-56-2, 1-(4-Methacroyloxyphenyl)-1,1-bis(4-
 trifluoroethenyloxyphenyl)ethane 161250-57-3, 1-(4-Acroylphenyl)-1,1-
 bis(4-trifluoroethenyloxyphenyl)ethane 161250-58-4,
 1-(4-Methacroylphenyl)-1,1-bis(4-trifluoroethenyloxyphenyl)ethane
 161250-59-5 161250-60-8 161250-61-9 161250-62-0,
 4-(1,1-Bis(4-trifluoroethenyloxyphenyl)ethyl)- β -(4-
 trifluoromethylbenzylidene)acetophenone 161250-63-1,
 4-(1,1-Bis(4-trifluoroethenyloxyphenyl)ethyl)- β -(4-
 carboxymethylbenzylidene)acetophenone 161250-64-2 161250-65-3,
 4-(1,1-Bis(4-trifluoroethenyloxyphenyl)ethyl)- β -(4-
 chlorobenzylidene)acetophenone 161250-66-4, 4-(1,1-Bis(4-
 trifluoroethenyloxyphenyl)ethyl)- β -(4-
 fluorobenzylidene)acetophenone 161250-67-5, 4-(1,1-Bis(4-
 trifluoroethenyloxyphenyl)ethyl)- β -(4-
 acetylbenzylidene)acetophenone 161250-68-6 161250-69-7,
 4-(1,1-Bis(4-trifluoroethenyloxyphenyl)ethyl)styrene 161250-70-0,
 4-(1,1-Bis(4-trifluoroethenyloxyphenyl)ethyl)-N-phenylmaleimide
 161250-71-1, 1-(4-(1,1-Bis(4-trifluoroethenyloxyphenyl)ethyl)phenyl)-5-
 phenyl-1,4-pentadiene-3-one 161250-72-2, 1-(4-(1,1-Bis(4-
 trifluoroethenyloxyphenyl)ethyl)phenyl)-5-(4-(dimethylamino)phenyl)-
 1,4-pentadiene-3-one 161250-73-3, 1-(4-(1,1-Bis(4-
 trifluoroethenyloxyphenyl)ethyl)phenyl)-5-(4-methoxyphenyl)-1,4-
 pentadiene-3-one 161250-74-4, 1-(4-(1,1-Bis(4-
 trifluoroethenyloxyphenyl)ethyl)phenyl)-5-(4-(carboxymethyl)phenyl)-
 1,4-pentadiene-3-one 161250-75-5, 1-(4-(1,1-Bis(4-
 trifluoroethenyloxyphenyl)ethyl)phenyl)-5-(4-(carboxyethyl)phenyl)-1,4-
 pentadiene-3-one 161250-76-6, 1-(4-(1,1-Bis(4-
 trifluoroethenyloxyphenyl)ethyl)phenyl)-5-(4-(trifluoromethyl)phenyl)-
 1,4-pentadiene-3-one 161250-77-7, 1-(4-(1,1-Bis(4-
 trifluoroethenyloxyphenyl)ethyl)phenyl)-5-(4-nitrophenyl)-1,4-
 pentadiene-3-one 161250-78-8, 1-(4-(1,1-Bis(4-
 trifluoroethenyloxyphenyl)ethyl)phenyl)-5-(4-chlorophenyl)-1,4-
 pentadiene-3-one 161250-79-9, 1-(4-(1,1-Bis(4-
 trifluoroethenyloxyphenyl)ethyl)phenyl)-5-(4-fluorophenyl)-1,4-
 pentadiene-3-one 161250-80-2, 1-(4-(1,1-Bis(4-
 trifluoroethenyloxyphenyl)ethyl)phenyl)-5-(4-acetophenyl)-1,4-
 pentadiene-3-one 161250-81-3, 1-(4-(1,1-Bis(4-
 trifluoroethenyloxyphenyl)ethyl)phenyl)-5-(4-cyanophenyl)-1,4-
 pentadiene-3-one 161250-82-4, 4-(1,1-Bis(4-
 trifluoroethenyloxyphenyl)ethyl)phenylacetylene 161250-83-5,
 4-(1,1-Bis(4-trifluoroethenyloxyphenyl)ethyl)phenylbuta-1,3-diyne

161250-84-6, 4-(1,1-Bis(4-trifluoroethenyloxyphenyl)ethyl)phenylhexa-
 1,3,5-triynyl 161250-85-7, 4-(1,1-Bis(4-trifluoroethenyloxyphenyl)eth-
 yl)phenylocta-1,3,5,7-tetrayne 161250-86-8, 4-(1,1-Bis(4-
 trifluoroethenyloxyphenyl)ethyl)phenyl-1,3,5,7,9-pentayne
 161250-87-9, 6-(4-(1,1-Bis(4-trifluoroethenyloxyphenyl)ethyl)p-
 henoxynaphthoquinone 161250-88-0, 6-(4-(1,1-Bis(4-
 trifluoroethenyloxyphenyl)ethyl)phenoxy)coumarin 161250-89-1
 , 7-(4-(1,1-Bis(4-trifluoroethenyloxyphenyl)ethyl)phenoxy)coumarin
 161250-90-4, 2-(4-(1,1-Bis(trifluoroethenyloxyphenyl)ethyl)benzylidene
)cyclohexanone 161250-91-5, 2-(4-(4-(1,1-
 Bis(trifluoroethenyloxyphenyl)ethyl)phenoxy)benzylidene)cyclohexanone
 161250-92-6, 1-Acroxyloxy-2-(4-trifluoroethenyloxy)benzoyloxyethane
 161250-93-7, 1-Methacroyloxy-2-(4-trifluoroethenyloxy)benzoyloxyethane
 161250-94-8, N-(4-Trifluoroethenyloxyphenyl)acrylamide 161250-95-9,
 N-(4-Trifluoroethenyloxyphenyl)methacrylamide 161250-96-0,
 4-Trifluoroethenyloxyphenylacrylate 161250-97-1,
 4-Trifluoroethenyloxyphenylmethacrylate 161250-98-2,
 N-(4-Trifluoroethenyloxyphenyl)maleimide 161250-99-3,
 N-(4-Trifluoroethenyloxybenzoyl)maleimide 161251-00-9 161251-01-0
 161251-02-1 161251-03-2 161251-04-3 161251-05-4 161251-06-5
 161251-07-6 161251-08-7 161251-09-8 161251-10-1 161251-11-2
 161251-12-3 161251-13-4 161251-14-5 161251-15-6 161251-16-7
 161251-17-8 161251-18-9 161251-19-0 161251-20-3 161251-21-4
 161251-22-5 161251-23-6 161251-24-7 161251-25-8 161251-26-9
 161251-27-0 161251-28-1 161251-29-2 161251-30-5 161251-31-6
 161251-32-7 161251-33-8 161251-34-9 161251-35-0 161251-36-1
 161251-37-2 161251-38-3 161251-39-4 161251-40-7 161251-41-8
 161251-42-9 161251-43-0 161251-44-1 161251-45-2 161251-46-3
 161251-47-4 161251-48-5 161251-49-6 161251-50-9 161251-51-0
 161251-52-1 161251-53-2 161251-54-3, 1-(4-Fluorophenyl)-2-(4-
 trifluoroethenyloxyphenyl)-1-propene 161251-55-4,
 2-(4-Fluorophenyl)-1-(4-trifluoroethenyloxyphenyl)-1-propene
 161251-56-5, 1-(4-Cyanophenyl)-2-(4-trifluoroethenyloxyphenyl)-1-
 propene 161251-57-6, 2-(4-Cyanophenyl)-1-(4-
 trifluoroethenyloxyphenyl)-1-propene 161251-58-7,
 2-(4-Acetylphenyl)-1-(4-trifluoroethenyloxyphenyl)-1-propene
 161251-59-8, 4-Methoxy-4'-trifluoroethenyloxystilbene 161251-60-1,
 4-Dimethylaminophenyl-4'-trifluoroethenyloxystilbene 161251-61-2,
 4-Carboxyethylphenyl-4'-trifluoroethenyloxystilbene 161251-62-3,
 4-Nitro-4'-trifluoroethenyloxystilbene 161251-63-4,
 4-Chloro-4'-trifluoroethenyloxystilbene 161251-64-5,
 4-Fluoro-4'-trifluoroethenyloxystilbene 161251-65-6,
 4-Cyano-4'-trifluoroethenyloxystilbene 161251-66-7,
 4-Acetyl-4'-trifluoroethenyloxystilbene 161251-67-8,
 4-Trifluoromethyl-4'-trifluoroethenyloxystilbene 161251-68-9
 161251-69-0 161251-70-3 161251-71-4 161251-72-5 161251-73-6
 161251-74-7 161251-75-8 161251-76-9 161251-77-0 161251-78-1,
 1,1-Bis(4-trifluoroethenyloxyphenyl)-1(4-(5-(2-furanyl)-2,4-pentadiene-
 1-onyl)phenyl)ethane 161251-79-2, 3,5-Bis(trifluoroethenyloxy)-
 β-(benzylidene)acetophenone 161251-80-5, 3,5-
 Bis(trifluoroethenyloxy)-β-(4'-methoxybenzylidene)acetophenone
 161251-81-6, 3,5-Bis(trifluoroethenyloxy)-β-(4'-
 dimethylaminobenzylidene)acetophenone 161251-82-7,
 3,5-Bis(trifluoroethenyloxy)-β-(4'-cyanobenzylidene)acetophenone
 161251-83-8, 3,5-Bis(trifluoroethenyloxy)-β-(4'-
 nitrobenzylidene)acetophenone 161251-84-9 161251-85-0
 161251-86-1 161251-87-2 161251-88-3 161251-89-4 161251-90-7
 161251-91-8 161251-92-9 161251-93-0 161251-94-1 161251-95-2
 161251-96-3 161251-97-4, 2,7-Bis(3-phenyl-2-propene-1-onyl)-9,9-
 bis(4-trifluoroethenyloxyphenyl)fluorene 161251-98-5 161251-99-6,

2,7-Bis(3-(2-methoxyphenyl)-2-propene-1-onyl)-9,9-bis(4-trifluoroethenyloxyphenyl)fluorene 161252-00-2, 2,7-Bis(3-(4-dimethylaminophenyl)-2-propene-1-onyl)-9,9-bis(4-trifluoroethenyloxyphenyl)fluorene 161252-01-3, 2,7-Bis(3-(4-cyanophenyl)-2-propene-1-onyl)-9,9-bis(4-trifluoroethenyloxyphenyl)fluorene 161252-02-4, 2,7-Bis(3-(4-nitrophenyl)-2-propene-1-onyl)-9,9-bis(4-trifluoroethenyloxyphenyl)fluorene 161252-03-5 161252-04-6 161252-05-7, 2-(5-(2-Methoxyphenyl)-2,4-pentadiene-1-onyl)-9,9-bis(4-trifluoroethenyloxyphenyl)fluorene 161252-06-8 161252-07-9, 2,7-Bis(5-(4-cyanophenyl)-2,4-pentadiene-1-onyl)-9,9-bis(4-trifluoroethenyloxyphenyl)fluorene 161252-08-0, 2,7-Bis(5-(4-nitrophenyl)-2,4-pentadiene-1-onyl)-9,9-bis(4-trifluoroethenyloxyphenyl)fluorene 161252-09-1, 2,7-Bis(5-(2-dimethylaminophenyl)-2,4-pentadiene-1-onyl)-9,9-bis(4-trifluoroethenyloxyphenyl)fluorene 161252-10-4 161252-11-5 161252-12-6 161252-13-7 161252-14-8 161252-15-9 161252-16-0 161252-17-1 161252-19-3 161252-20-6 161252-21-7 161252-22-8 (monomer for photodefinable polymer)

IT 161252-23-9P 161252-25-1P 161252-26-2P 161252-28-4P
161252-29-5P 161252-30-8P 161252-31-9P

(photodefinable polymer for photoresist)

IT 134151-69-2P 134151-70-5P 134151-75-0P 134151-76-1P
161252-24-0P 161252-27-3P

(photodefinable polymer for photoresist)

L61 ANSWER 28 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1995:370781 HCAPLUS

DOCUMENT NUMBER: 122:201275

TITLE: Positive-working photoresist compositions useful for making semiconductor devices

INVENTOR(S): Sato, Kenichiro; Aoso, Toshiaki; Kawabe, Yasumasa; Kokubo, Tadayoshi

PATENT ASSIGNEE(S): Fuji Photo Film Co Ltd, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 16 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

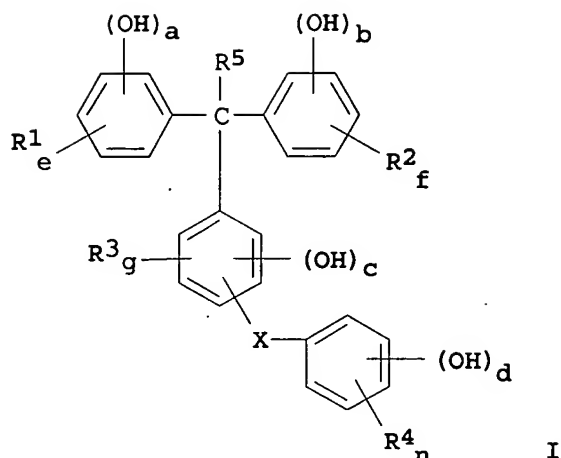
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 06308724	A	19941104	JP 1993-93199	19930420

PRIORITY APPLN. INFO.: JP 1993-93199 19930420

OTHER SOURCE(S): MARPAT 122:201275

ED Entered STN: 23 Feb 1995

GI



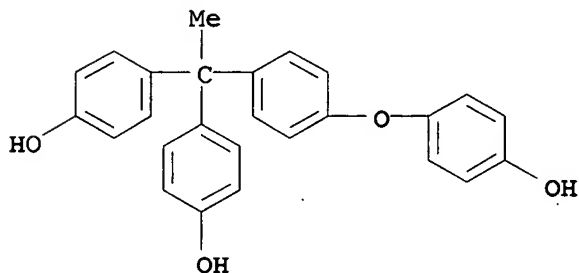
AB The title **photoresist** compns. contain an alkali-soluble resin, a quinonediazide compound, and a polyhydric compound I [X = O, S, SO, SO₂, SO₃, SO₂NH, NH, CO, CO₂, CS, CONH; R₁-4 = H, halo, alkyl, aryl, aralkyl, alkoxy, acyl, alkoxy carbonyl, alkenyl, NO₂, CN; R₅ = H, halo, alkyl, aryl, aralkyl, alkoxy, acyl, alkoxy carbonyl, alkenyl, NO₂, CN; a, b, d = 0-5 (≥1 of them should not be 0); c, g = 0-4; e, f, h = 0-5]. The compns., useful for making semiconductor devices, provide high resolution **resist** patterns with good development and thermal **resistance**. Thus, a **resist** comprised m-cresol-p-cresol-HCHO novolak resin, 1,2-naphthoquinonediazido-5-sulfonate of 2,3,4-trihydroxybenzophenone, and (p-HOC₆H₄)₂CMe-(p-C₆H₄)O(C₆H₄OH-p).

IT 161495-94-9P

(photoresist composition containing quinonediazide compound and polyhydric compound)

RN 161495-94-9 HCAPLUS

CN Phenol, 4,4'-[1-[4-(4-hydroxyphenoxy)phenyl]ethylidene]bis- (9CI) (CA INDEX NAME)



IC ICM G03F007-022

ICS H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 76

ST quinonediazide compd pos working **photoresist**; polyhydric triphenylmethane compd **photoresist**

IT Phenolic resins, preparation

(photoresist composition containing quinonediazide compound and polyhydric compound)

IT Resists

(photo-, photoresist composition containing quinonediazide compound and polyhydric compound)

IT 27029-76-1P 68510-93-0P 107761-81-9P, 2,3,4,4'-
Tetrahydroxybenzophenone 1,2-naphthoquinonediazide-5-sulfonic acid
ester 161495-94-9P 161495-95-0P 161717-38-0P
(photoresist composition containing quinonediazide compound and polyhydric compound)

L61 ANSWER 29 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1995:370780 HCAPLUS

DOCUMENT NUMBER: 122:201274

TITLE: Positive-working photoresist
compositions useful for making semiconductor
devices

INVENTOR(S): Sato, Kenichiro; Aoso, Toshiaki; Kawabe, Yasumasa;
Kokubo, Tadayoshi

PATENT ASSIGNEE(S): Fuji Photo Film Co Ltd, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 15 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

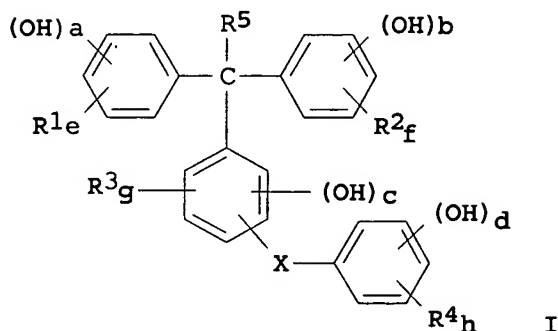
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 06308723	A	19941104	JP 1993-93198	19930420
			<--	
PRIORITY APPLN. INFO.:			JP 1993-93198	19930420
			<--	

ED Entered STN: 23 Feb 1995

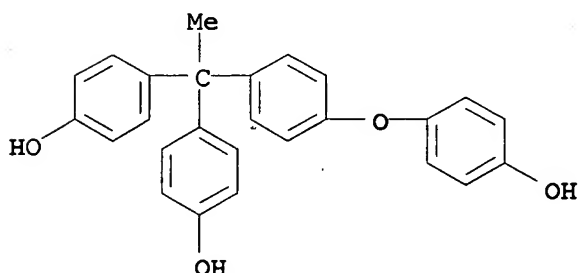
GI



AB The title photoresist comps. contain an alkali-soluble resin and 1,2-naphthoquinonediazido-5-(and/or 4-)sulfonic acid ester of a polyhydroxy compound I [X = O, S, SO, SO₂, SO₃, SO₂NH, NH, CO, CO₂, CS, CONH; R₁-4 = H, halo, alkyl, aryl, aralkyl, alkoxy, acyl, alkoxy carbonyl, alkenyl, NO₂, CN; R₅ = H, halo, alkyl, aryl, aralkyl, alkoxy, acyl, alkoxy carbonyl, alkenyl, NO₂, CN; a, b, d = 0-5

(≥ 1 of them should not be O); c, g = 0-4; e, f, h = 0-5]. The compns., useful for making semiconductor devices, provide high resolution resist patterns with good profile, develop-ability, and thermal resistance. Thus, a resist comprises m-cresol-p-cresol-HCHO novolak resin and 1,2-naphthoquinonediazido-5-sulfonate of (p-HOC₆H₄)₂CMe-(p-C₆H₄)O(C₆H₄OH-p).

IT 161495-94-9
(esterification with naphthoquinonediazidesulfonic acid)
RN 161495-94-9 HCAPLUS
CN Phenol, 4,4'-[1-[4-(4-hydroxyphenoxy)phenyl]ethylidene]bis- (9CI) (CA INDEX NAME)



IC ICM G03F007-022
ICS H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
ST quinonediazidesulfonate pos working photoresist; polyhydroxy compd quinonediazidesulfonate photoresist
IT Phenolic resins, uses
(novolak, pos.-working photoresist composition containing naphthoquinonediazidesulfonic acid ester of polyhydric compound)
IT Resists
(photo-, pos.-working photoresist composition containing naphthoquinonediazidesulfonic acid ester of polyhydric compound)
IT 161495-94-9 161495-95-0 161495-96-1
(esterification with naphthoquinonediazidesulfonic acid)
IT 27029-76-1P, m-Cresol-p-cresol-formaldehyde copolymer 161817-92-1P 161817-93-2P 161817-94-3P
(pos.-working photoresist composition containing naphthoquinonediazidesulfonic acid ester of polyhydric compound)

L61 ANSWER 30 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1995:294852 HCAPLUS

DOCUMENT NUMBER: 122:188507

TITLE: Thermally stable aromatic polycarbonates

INVENTOR(S): Totani, Yoshuki; Hirao, Genichi; Ito, Tomomichi; Nakatsuka, Masakatsu; Yamaguchi, Teruhiro

PATENT ASSIGNEE(S): Mitsui Toatsu Chemicals, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 06287293 A 19941011 JP 1993-80432 19930407
 JP 3218117 B2 20011015 <--
 PRIORITY APPLN. INFO.: JP 1993-80432 19930407
 <--

ED Entered STN: 14 Jan 1995

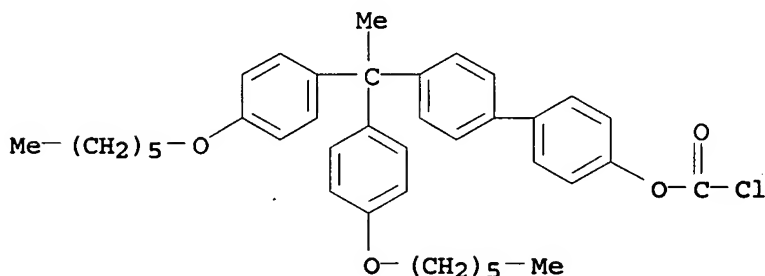
AB Title polycarbonates with good flowability and heat resistance are terminated by (R1OZ1) (R2OZ2) (R3)CZ3 (R1, R2 = alkyl; R3 = alkyl, aryl, aralkyl; Z1-Z3 = divalent aromatic residue) groups. Thus, 4.0 mol bisphenol A and 0.1376 mol 4-[1',1'-bis(4"-ethoxyphenyl)ethyl]phenol were stirred in CH2Cl2/H2O with 5.0 mol COCl2 to obtain a polymer with Mn 20,700, Mw 50,900, melt index (2.16 kg, 280°) 16 g/10 min, and Tg 145°.

IT 161639-75-4

(end-capping agent; preparation of thermally stable aromatic polycarbonates with good flowability)

RN 161639-75-4 HCAPLUS

CN Carbonochloridic acid, 4'-[1,1-bis[4-(hexyloxy)phenyl]ethyl][1,1'-biphenyl]-4-yl ester (CA INDEX NAME)



IC ICM C08G064-14

ICS C08G064-20

CC 35-5 (Chemistry of Synthetic High Polymers)

ST arom polycarbonate heat resistance; melt flowability arom polycarbonate; end capping agent arom polycarbonate; terminated arom polycarbonate prepn

IT 161639-71-0 161639-72-1 161639-73-2 161639-74-3

161639-75-4 161639-76-5

(end-capping agent; preparation of thermally stable aromatic polycarbonates with good flowability)

L61 ANSWER 31 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1995:280353 HCAPLUS

DOCUMENT NUMBER: 122:266816

TITLE: Molecular design of epoxy resins for microelectronics packaging

AUTHOR(S): Kaji, Masashi

CORPORATE SOURCE: Res. Development Lab., Nippon Steel Chemical Co., Ltd., Fukuoka, 804, Japan

SOURCE: ACS Symposium Series (1994), 579(Polymeric Materials for Microelectronic Applications), 220-33

CODEN: ACSMC8; ISSN: 0097-6156

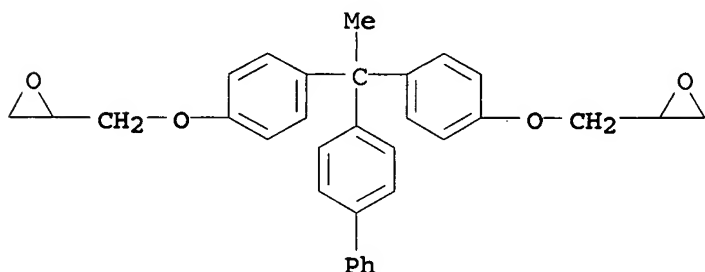
PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 07 Jan 1995

- AB The relations between the structures and properties of epoxy resins were investigated to achieve improved toughness, low moisture absorption, increased heat resistance, low thermal expansion, and decreased viscosity of epoxy resins for high filler loading. Introduction of a rigid group, such as 4,4'-biphenyl or 2,6-naphthalene moiety, was an effective way to improve fracture toughness, and the naphthalene-based resins were effective for lowering moisture absorption, increasing glass transition temperature, and lowering thermal expansion. Several epoxy resins of the bisphenol-type with lower melting viscosity were synthesized and used as molding compds. for IC packaging. Crack resistance of the packages using these resins was markedly superior due to high filler loading due to their lower viscosity.
- IT 162753-99-3D, reaction products with phenolic novolaks (thermal and mech. properties of epoxy resins for I.C. packages as a function of structure)
- RN 162753-99-3 HCAPLUS
- CN Oxirane, 2,2'-[(1-[1,1'-biphenyl]-4-ylethylidene)bis(4,1-phenyleneoxymethylene)]bis- (CA INDEX NAME)



- CC 37-5 (Plastics Manufacture and Processing)
Section cross-reference(s): 38, 76
- IT 1675-54-3D, reaction products with phenolic novolaks 2095-03-6D, reaction products with phenolic novolaks 2461-46-3D, 4,4'-Biphenyldiol diglycidyl ether, reaction products with phenolic novolaks 2994-63-0D, 4,4'-Hexafluoroisopropylidenediphenol diglycidyl ether, reaction products with phenolic novolaks 3878-43-1D, Diphenylolsulfone diglycidyl ether, reaction products with phenolic novolaks 5145-95-9D, reaction products with phenolic novolaks 7328-97-4D, 1,1,2,2-Tetra(p-hydroxyphenyl)ethane tetraglycidyl ether, reaction products with phenolic novolaks 13368-56-4D, 1,1-Bis(4-hydroxyphenyl)-1-phenylethane diglycidyl ether, reaction products with phenolic novolaks 16558-06-8D, 4,4'-Thiobisphenol diglycidyl ether, reaction products with phenolic novolaks 19389-73-2D, 4,4'-Oxybisphenol diglycidyl ether, reaction products with phenolic novolaks 25302-12-9D, Formaldehyde-2-naphthol copolymer, reaction products with epichlorohydrin and phenolic novolaks 25359-91-5D, Formaldehyde-1-naphthol copolymer, reaction products with epichlorohydrin and phenolic novolaks 26564-94-3D, reaction products with phenolic novolaks 43224-82-4D, Tris(4-hydroxyphenyl)methane triglycidyl ether, reaction products with phenolic novolaks 47758-37-2D, reaction products with phenolic novolaks 107530-04-1D, 1,6-Naphthalenediol, polymer with formaldehyde, reaction products with epichlorohydrin and phenolic novolaks 113601-85-7D, reaction products with epichlorohydrin and phenolic novolaks 113601-86-8D, 1,4-Benzenedimethanol, polymer with 2-naphthalenol, reaction products with epichlorohydrin and phenolic

novolaks 134118-68-6D, 1-Naphthalenol, polymer with 2-hydroxy-5-methyl-1,3-benzenedimethanol, reaction products with epichlorohydrin and phenolic novolaks 134118-69-7D, 2-Naphthalenol, polymer with 2-hydroxy-5-methyl-1,3-benzenedimethanol, reaction products with epichlorohydrin and phenolic novolaks 142416-74-8D, 1,6-Naphthalenediol, polymer with 1,4-benzenedimethanol, reaction products with epichlorohydrin and phenolic novolaks 142416-75-9D, 1,7-Naphthalenediol, polymer with 1,4-benzenedimethanol, reaction products with epichlorohydrin and phenolic novolaks 142416-76-0D, 2,7-Naphthalenediol, polymer with 1,4-benzenedimethanol, reaction products with epichlorohydrin and phenolic novolaks 158626-38-1D, reaction products with phenolic novolaks 162753-98-2D, reaction products with phenolic novolaks 162753-99-3D, reaction products with phenolic novolaks 162754-00-9D, reaction products with epichlorohydrin and phenolic novolaks (thermal and mech. properties of epoxy resins for I.C. packages as a function of structure)

L61 ANSWER 32 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1994:257495 HCAPLUS

DOCUMENT NUMBER: 120:257495

TITLE: Aromatic chloroformate compound for thermal recording color developer

INVENTOR(S): Hirao, Genichi; Totani, Yoshuki; Ito, Tomomichi; Nakatsuka, Masakatsu

PATENT ASSIGNEE(S): Mitsui Toatsu Chemicals, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

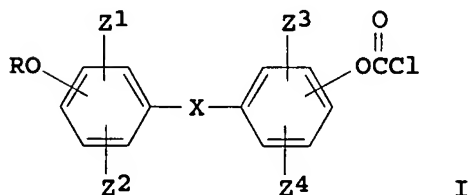
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 05306260	A	19931119	JP 1993-5608	19930118
			<--	
JP 3361560	B2	20030107		
PRIORITY APPLN. INFO.:			JP 1992-11905	A1 19920127
			<--	

OTHER SOURCE(S): MARPAT 120:257495

ED Entered STN: 14 May 1994

GI



AB The compound has a general formula I (R = aralkyl; X = C1-14 alkylene, O, S; Z1-4 = H, C1-4 alkyl, halo). I is an useful intermediate for organic industrial compds. Na 4-[4'-(4-benzyloxy)cumylphenyloxycarbonyla

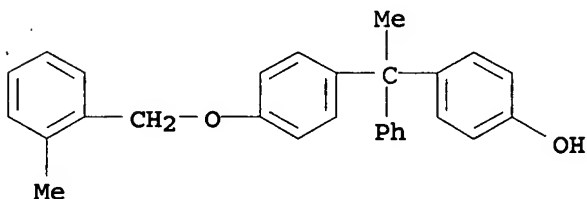
mino]benzoate prepared from I was used as a thermal recording color developer.

IT 152430-92-7

(chlorocarbonylation of)

RN 152430-92-7 HCAPLUS

CN Phenol, 4-[1-[4-[(2-methylphenyl)methoxy]phenyl]-1-phenylethyl]- (CA INDEX NAME)

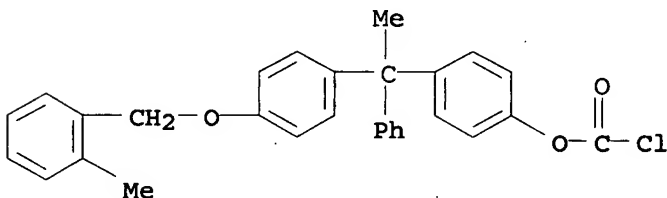


IT 154421-27-9P

(preparation of, precursor for organic industrial compds.)

RN 154421-27-9 HCAPLUS

CN Carbonochloridic acid, 4-[1-[4-[(2-methylphenyl)methoxy]phenyl]-1-phenylethyl]phenyl ester (CA INDEX NAME)



IC ICM C07C069-96

ICS C08G064-28

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 25

IT 1988-89-2 42781-88-4 152430-84-7 152430-85-8 152430-86-9
152430-87-0 152430-92-7 154421-31-5 154421-32-6
154421-33-7 154421-34-8 154421-35-9 154421-36-0 154421-37-1
154421-38-2

(chlorocarbonylation of)

IT 154421-17-7P 154421-18-8P 154421-19-9P 154421-20-2P
154421-21-3P 154421-22-4P 154421-23-5P 154421-24-6P
154421-25-7P 154421-26-8P 154421-27-9P 154421-28-0P
154421-29-1P 154421-30-4P

(preparation of, precursor for organic industrial compds.)

L61 ANSWER 33 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1994:106532 HCAPLUS

DOCUMENT NUMBER: 120:106532

TITLE: Preparation of phenols

INVENTOR(S): Ito, Tomomichi; Hirao, Genichi; Totani, Yoshuki; Nakatsuka, Masakatsu

PATENT ASSIGNEE(S): Mitsui Toatsu Chemicals, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.

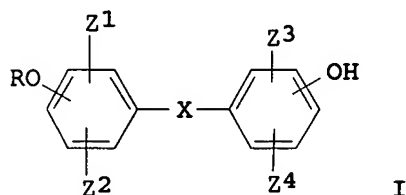
CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

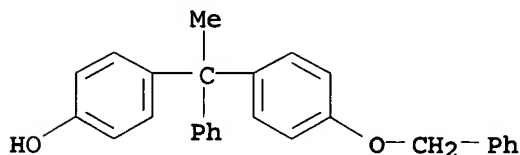
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 05221911	A	19930831	JP 1992-312037	19921120
			<--	
PRIORITY APPLN. INFO.:			JP 1991-322916	A1 19911206
			<--	

OTHER SOURCE(S): MARPAT 120:106532
 ED Entered STN: 05 Mar 1994
 GI

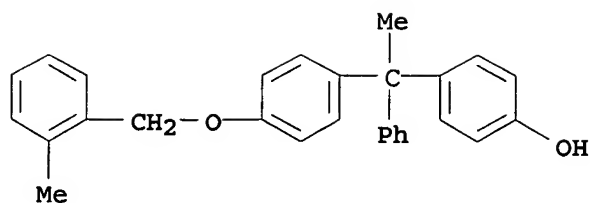


AB Phenols I (R = aralkyl; X = C5-14 cycloalkylidene, 1,1-ethylidene, 1,2-ethylene, 1,1-propylidene, 1,1- or 2,2-butylidene, 4-methyl-2,2-pentylidene, phenylmethylene, 1-phenyl-1,1-ethylidene; Z1-4 = H, halo, C1-4 alkyl), useful as organic functional materials such as materials for heat-sensitive recording papers, are prepared. A solution of 50 g 1,1-bis(4'-hydroxyphenyl)cyclohexane and NaOH in H₂O-Me₂CHOH was treated with 32 g PhCH₂Br at 80-85° for 3 h to give 30 g 1-(4'-benzyloxyphenyl)-1-(4''-hydroxyphenyl)cyclohexane. Heat-sensitive recording paper was prepared using 2-[4'-(4-chlorobenzoyloxy)phenyl]-2-(4''-hydroxyphenyl)butane as an electron acceptor to show rapid coloration at low temperature.

IT 152430-91-6P 152430-92-7P
 (preparation of, as organic functional material)
 RN 152430-91-6 HCAPLUS
 CN Phenol, 4-[1-phenyl-1-[4-(phenylmethoxy)phenyl]ethyl]- (CA INDEX NAME)



RN 152430-92-7 HCAPLUS
 CN Phenol, 4-[1-[4-[(2-methylphenyl)methoxy]phenyl]-1-phenylethyl]- (CA INDEX NAME)



IC ICM C07C043-23
 ICS B41M005-30
 ICA A01N031-16
 CC 25-10 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)
 Section cross-reference(s): 74
 IT 52252-99-0P 152430-83-6P 152430-84-7P 152430-85-8P
 152430-86-9P 152430-87-0P 152430-88-1P 152430-89-2P
 152430-90-5P 152430-91-6P 152430-92-7P
 (preparation of, as organic functional material)

L61 ANSWER 34 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1993:215014 HCAPLUS

DOCUMENT NUMBER: 118:215014

TITLE: Radiation-curable aromatic urethane
 (meth)acrylates

INVENTOR(S): Kinoshita, Masayuki; Ishikawa, Hidenori

PATENT ASSIGNEE(S): Dainippon Ink and Chemicals, Inc., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

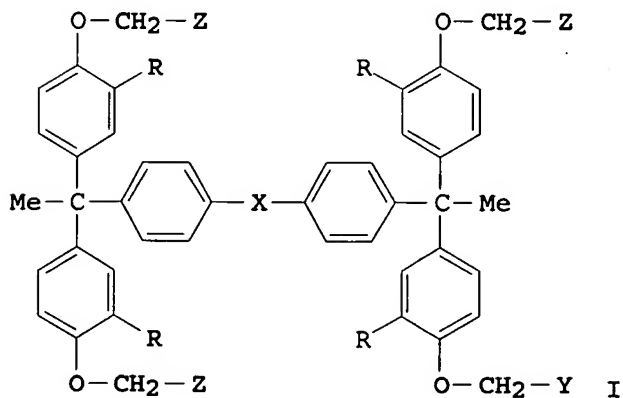
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 04253716	A	19920909	JP 1991-14318	19910205
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			JP 1991-14318	19910205
			<--	

PRIORITY APPLN. INFO.:

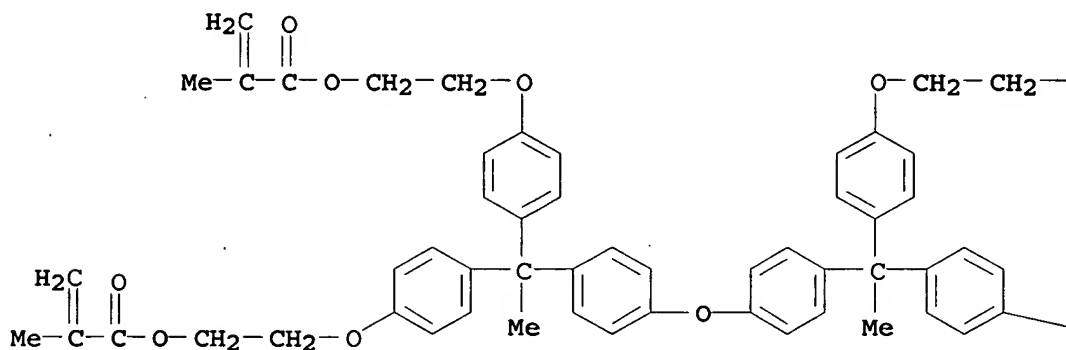
ED Entered STN: 29 May 1993

GI

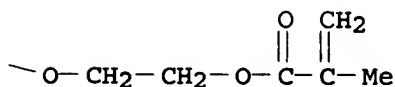
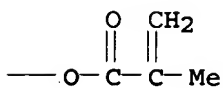


- AB The title compds. I [R = H, Me; X = O, CH₂; Y = CH(OCONHX₁)CH₂OCOCR:CHR₁; R₁ = H, Me, CN, halo; Z = Y, CH(OH)CH₂OCOCR:CHR₁; X₁ = (meth)acryloyl group-containing residue] are useful for coatings, inks, etc. Thus, reacting 2-hydroxyethyl acrylate-TDI adduct (1:1) with a tetrafunctional hydroxy compound (prepared by condensation of 4,4'-diacetyldiphenyl ether with phenol, followed by reaction with epichlorohydrin and then with acrylic acid) gave a product, which was photopolymd. to give a coating with good heat, water, and alkali **resistance**.
- IT 147363-81-3DP, reaction products with hydroxyethyl (meth)acrylate-diisocyanate adducts, polymers (preparation of, as photocured heat- and water- and alkali-resistant coatings)
- RN 147363-81-3 HCAPLUS
- CN 2-Propenoic acid, 2-methyl-, oxybis[4,1-phenyleneethylidynebis(4,1-phenyleneoxy-2,1-ethanediyl)] ester (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



- IC ICM C08F299-02
- ICA C09D171-00
- CC 42-10 (Coatings, Inks, and Related Products)
- ST photocured urethane acrylate coating; diphenylethane urethane acrylate coating; diphenyl ether urethane acrylate coating; alkali **resistance** coating urethane acrylate; heat **resistance**

coating urethane acrylate; water resistance coating urethane acrylate

IT Coating materials

(photocurable, urethane (meth)acrylate polymers, with good heat- and water- and alkali-resistance)

IT 115-77-5DP, reaction products with isophorone diisocyanate and di-Ph ether phenol derivs., polymers 4098-71-9DP, reaction products with pentaerythritol and di-Ph ether phenol derivs., polymers 35913-04-3DP, reaction products with di-Ph ether phenol derivs., polymers 54554-39-1DP, reaction products with di-Ph ether phenol derivs., polymers 147363-81-3DP, reaction products with hydroxyethyl (meth)acrylate-diisocyanate adducts, polymers (preparation of, as photocured heat- and water- and alkali-resistant coatings)

L61 ANSWER 35 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1993:193720 HCAPLUS

DOCUMENT NUMBER: 118:193720

TITLE: Radiation-curable aromatic polyepoxide derivatives containing acrylate or similar groups

INVENTOR(S): Kinoshita, Masayuki; Ishikawa, Hidenori

PATENT ASSIGNEE(S): Dainippon Ink and Chemicals, Inc., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

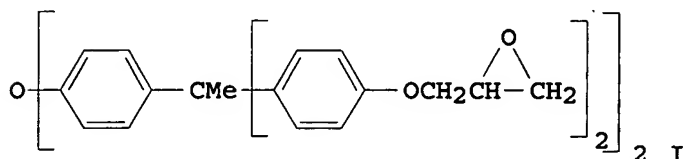
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 04239011	A	19920826	JP 1991-1528	19910110
			<--	
			JP 1991-1528	19910110
			<--	

ED Entered STN: 14 May 1993

GI



AB The title derivs. are prepared from a tetraepoxide such as I (i.e., prepared from a reaction product of phenol and 4,4'-diacetyldiphenyl ether) and are useful for coatings, etc. Heating 874 g I with 288 g acrylic acid gave an acrylate group-containing reaction product (epoxide equivalent weight $\geq 15,000$) which gave a photocured coating with good heat, water, and alkali resistance.

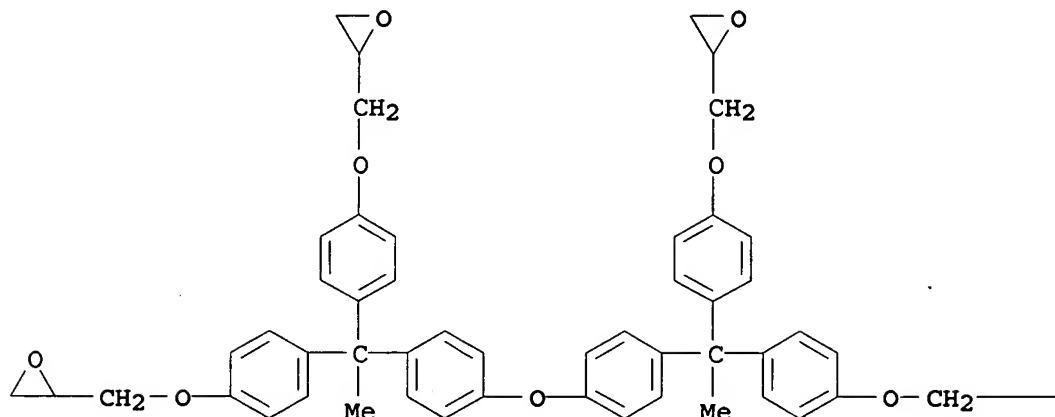
IT 140365-06-6DP, reaction products with acrylic acid, polymers (preparation of photocured, heat- and alkali-resistant)

RN 140365-06-6 HCAPLUS

CN Oxirane, 2,2',2'',2'''-[oxybis[4,1-phenyleneethyldynebis(4,1-

phenyleneoxymethylene]]]tetrakis- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



IC ICM C08F299-02
 ICS C08F299-00; C08G059-14
 CC 42-10 (Coatings, Inks, and Related Products)
 ST photocuring epoxy acrylate; acetylphenyl ether phenol epoxy acrylate;
 alkali resistance coating epoxy acrylate; crosslinking UV
 arom epoxy acrylate; polymn UV arom epoxy acrylate
 IT Epoxy resins, compounds
 (acrylates, preparation of photocured, heat- and alkali-
 resistant)
 IT Crosslinking
 (photochem., epoxy acrylates for, as heat- and alkali-
 resistant coatings)
 IT 79-10-7DP, Acrylic acid, esters with aromatic tetraepoxides, polymers
 140365-06-6DP, reaction products with acrylic acid, polymers
 (preparation of photocured, heat- and alkali-resistant)

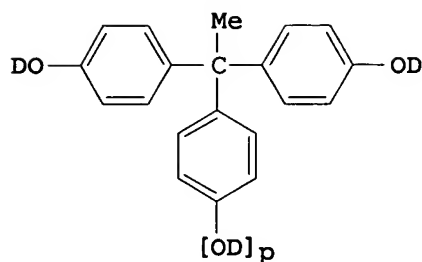
L61 ANSWER 36 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1992:540649 HCAPLUS

USHA SHRESTHA EIC 1700 REM 4B31

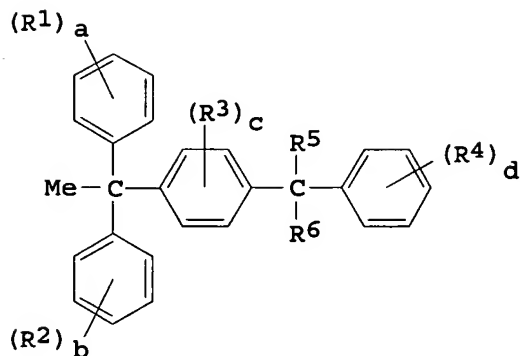
DOCUMENT NUMBER: 117:140649
 TITLE: Radiation-sensitive resin composition
 INVENTOR(S): Kajita, Toru; Miura, Takao; Yomoto, Yoshiji;
 Okuda, Chozo
 PATENT ASSIGNEE(S): Japan Synthetic Rubber Co., Ltd., Japan
 SOURCE: Eur. Pat. Appl., 20 pp.
 CODEN: EPXXDW
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 443820	A2	19910828	EP 1991-301322	19910220
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EP 443820	A3	19911127		
EP 443820	B1	19980909		
R: DE, FR, GB, IT, NL				
US 5238775	A	19930824	US 1991-656857	19910219
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JP 04211254	A	19920803	JP 1991-47693	19910220
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JP 2927013	B2	19990728		
JP 04211255	A	19920803	JP 1991-47694	19910220
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JP 2927014	B2	19990728		
JP 10133369	A	19980522	JP 1997-347007	19971201
			<--	
JP 2921519	B2	19990719		
JP 10142784	A	19980529	JP 1997-347006	19971201
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JP 2921518	B2	19990719		
JP 10147561	A	19980602	JP 1997-347005	19971201
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JP 2888236	B2	19990510		
PRIORITY APPLN. INFO.:			JP 1990-39409	A 19900220
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			JP 1991-47693	A3 19910220
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ED Entered STN: 04 Oct 1992
 GI



I



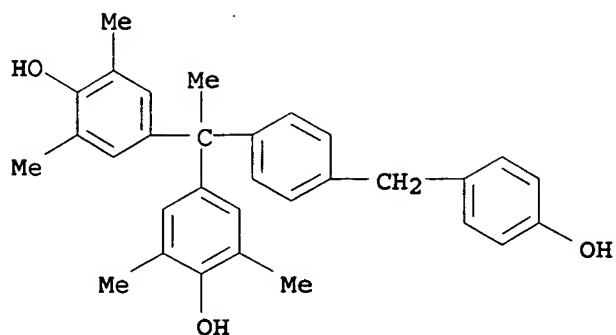
II

AB The title composition contains an alkali-soluble resin containing ≥ 1 of I and II [D = H, 1,2-quinone diazide; p = 0, 1; R1-R4 = alkyl, aryl, OD; ≥ 1 of R1-R4 is OD; R5, R6 = H, alkyl; a, b, d = 0-5, >1 of them is >0 ; c = 0-4]. The title composition is suitable for use as a pos.-type photoresist which has such excellent developability as to inhibit effectively the generation of scum in the formation of a pattern, has high sensitivity, and is excellent in heat resistance.

IT 142996-08-5 142996-08-5D, quinonediazidesulfonates
 142996-09-6 142996-09-6D, quinonediazidesulfonates
 142996-10-9 142996-10-9D, quinonediazidesulfonates
 142996-11-0 142996-11-0D, quinonediazidesulfonates
 142996-12-1 142996-12-1D, quinonediazidesulfonates
 143016-47-1 143016-47-1D, quinonediazidesulfonates
 143016-48-2 143016-48-2D, quinonediazidesulfonates
 (photoresist compns. containing)

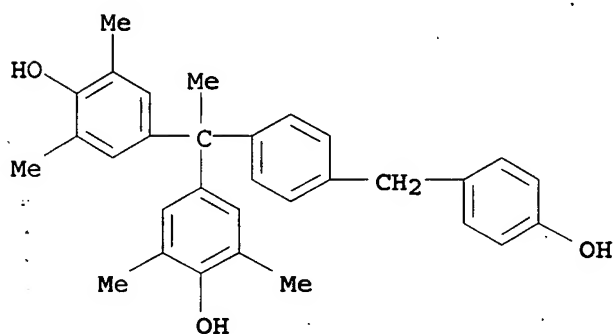
RN 142996-08-5 HCAPLUS

CN Phenol, 4,4'-[1-[4-[(4-hydroxyphenyl)methyl]phenyl]ethylidene]bis[2,6-dimethyl- (CA INDEX NAME)]



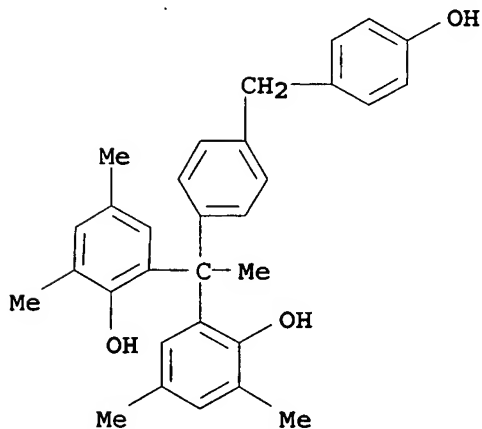
RN 142996-08-5 HCAPLUS

CN Phenol, 4,4'-[1-[4-[(4-hydroxyphenyl)methyl]phenyl]ethylidene]bis[2,6-dimethyl- (CA INDEX NAME)



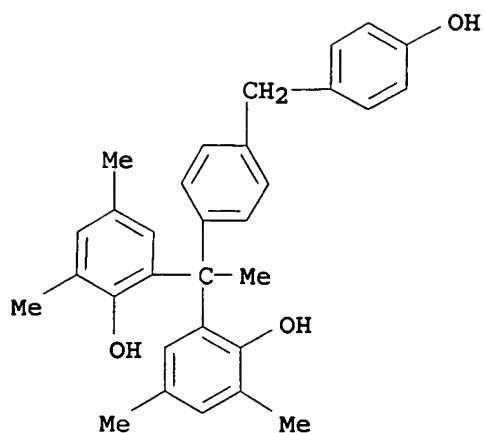
RN 142996-09-6 HCAPLUS

CN Phenol, 2,2'-[1-[4-[(4-hydroxyphenyl)methyl]phenyl]ethylidene]bis[4,6-dimethyl- (CA INDEX NAME)



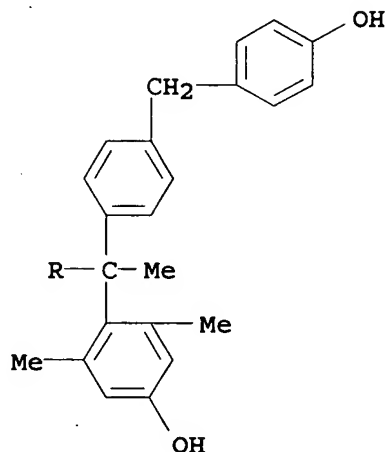
RN 142996-09-6 HCAPLUS

CN Phenol, 2,2'-[1-[4-[(4-hydroxyphenyl)methyl]phenyl]ethylidene]bis[4,6-dimethyl- (CA INDEX NAME)

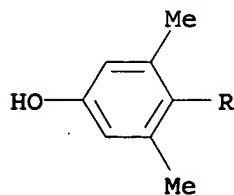


RN 142996-10-9 HCAPLUS
 CN Phenol, 4,4'-[1-[4-[(4-hydroxyphenyl)methyl]phenyl]ethylidene]bis[3,5-dimethyl- (CA INDEX NAME)

PAGE 1-A

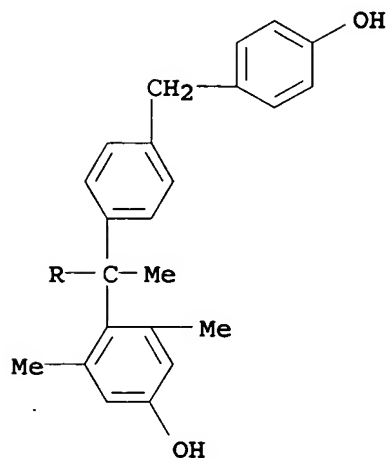


PAGE 2-A

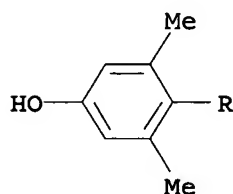


RN 142996-10-9 HCAPLUS
 CN Phenol, 4,4'-[1-[4-[(4-hydroxyphenyl)methyl]phenyl]ethylidene]bis[3,5-dimethyl- (CA INDEX NAME)

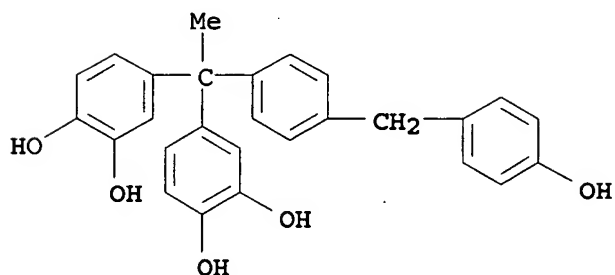
PAGE 1-A



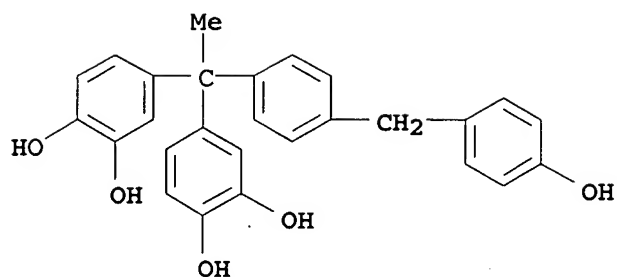
PAGE 2-A



RN 142996-11-0 HCAPLUS
 CN 1,2-Benzenediol, 4,4'-[1-[4-[(4-hydroxyphenyl)methyl]phenyl]ethylidene
]bis- (CA INDEX NAME)

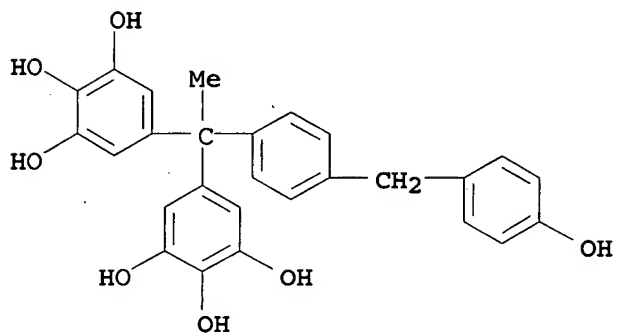


RN 142996-11-0 HCAPLUS
 CN 1,2-Benzenediol, 4,4'-[1-[4-[(4-hydroxyphenyl)methyl]phenyl]ethylidene
]bis- (CA INDEX NAME)



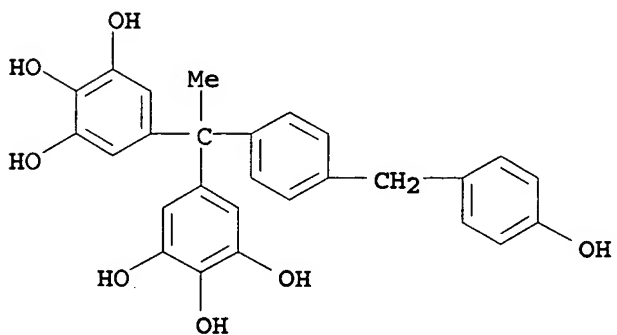
RN 142996-12-1 HCAPLUS

CN 1,2,3-Benzenetriol, 5,5'-[1-[4-[(4-hydroxyphenyl)methyl]phenyl]ethylidene]bis- (CA INDEX NAME)



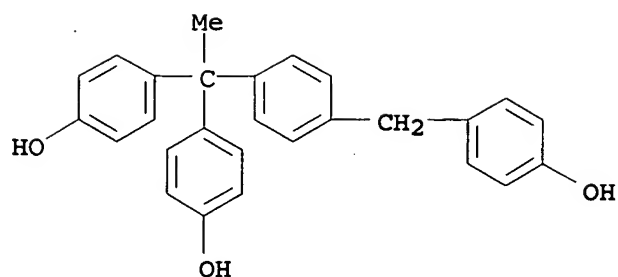
RN 142996-12-1 HCAPLUS

CN 1,2,3-Benzenetriol, 5,5'-[1-[4-[(4-hydroxyphenyl)methyl]phenyl]ethylidene]bis- (CA INDEX NAME)

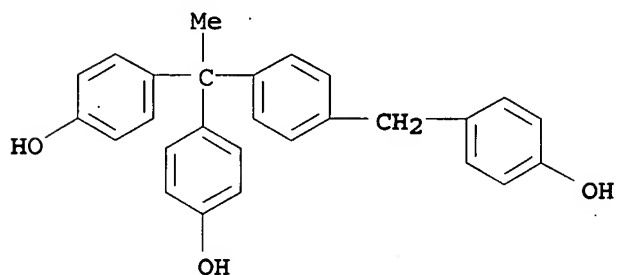


RN 143016-47-1 HCAPLUS

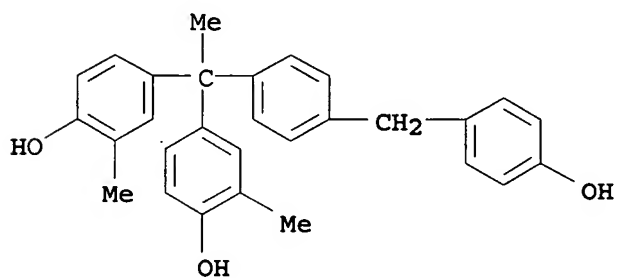
CN Phenol, 4,4'-[1-[4-[(4-hydroxyphenyl)methyl]phenyl]ethylidene]bis- (9CI) (CA INDEX NAME)



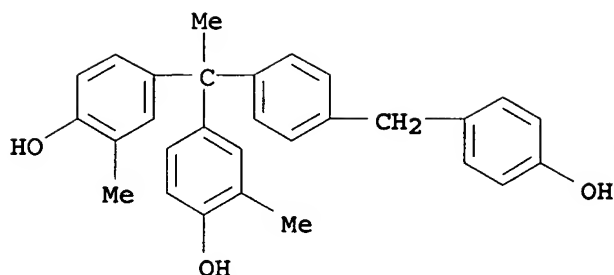
RN 143016-47-1 HCAPLUS
 CN Phenol, 4,4'-[1-[4-[(4-hydroxyphenyl)methyl]phenyl]ethyldene]bis-
 (9CI) (CA INDEX NAME)



RN 143016-48-2 HCAPLUS
 CN Phenol, 4,4'-[1-[4-[(4-hydroxyphenyl)methyl]phenyl]ethyldene]bis[2-
 methyl- (CA INDEX NAME)



RN 143016-48-2 HCAPLUS
 CN Phenol, 4,4'-[1-[4-[(4-hydroxyphenyl)methyl]phenyl]ethyldene]bis[2-
 methyl- (CA INDEX NAME)



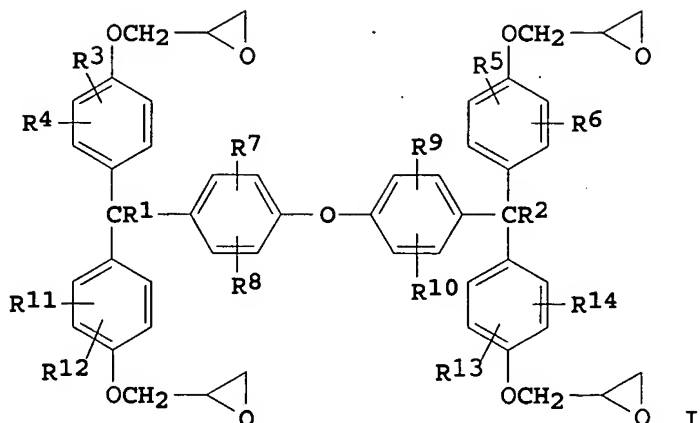
IC ICM G03F007-022
ICS C07C039-15
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
ST **photoresist** quinonediazide compd; phenolic compd
IT **photoresist**; scum prevention **photoresist**
IT **Resists**
(photo-, containing phenolic or ester compds. for scum prevention)
IT 4081-02-1 27955-94-8 110726-28-8 110726-28-8D,
quinonediazidesulfonates 142996-08-5 142996-08-5D,
quinonediazidesulfonates 142996-09-6 142996-09-6D,
quinonediazidesulfonates 142996-10-9 142996-10-9D,
quinonediazidesulfonates 142996-11-0 142996-11-0D,
quinonediazidesulfonates 142996-12-1 142996-12-1D,
quinonediazidesulfonates 142996-13-2 142996-13-2D,
quinonediazidesulfonates 142996-14-3 142996-14-3D,
quinonediazidesulfonates 142996-15-4 142996-15-4D,
quinonediazidesulfonates 142996-16-5 142996-16-5D,
quinonediazidesulfonates 142996-17-6 142996-17-6D,
quinonediazidesulfonates 142996-18-7 142996-18-7D,
quinonediazidesulfonates 143016-47-1 143016-47-1D,
quinonediazidesulfonates 143016-48-2 143016-48-2D,
quinonediazidesulfonates
(**photoresist** compns. containing)
IT 25086-36-6P 27029-76-1P 62655-78-1P 103735-35-9P 137902-98-8P
138636-85-8P 143178-45-4P 143179-02-6P
(preparation and use of, in **photoresist** compns.)

L61 ANSWER 37 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1992:175450 HCAPLUS
DOCUMENT NUMBER: 116:175450
TITLE: Epoxy resin potting compositions for semiconductor
INVENTOR(S): Mogi, Naoki; Naruse, Shigeru
PATENT ASSIGNEE(S): Sumitomo Bakelite Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 03195723	A	19910827	JP 1989-332944	19891225
			<--	
JP 2744499	B2	19980428		
PRIORITY APPLN. INFO.:			JP 1989-332944	19891225

ED Entered STN: 03 May 1992
GI

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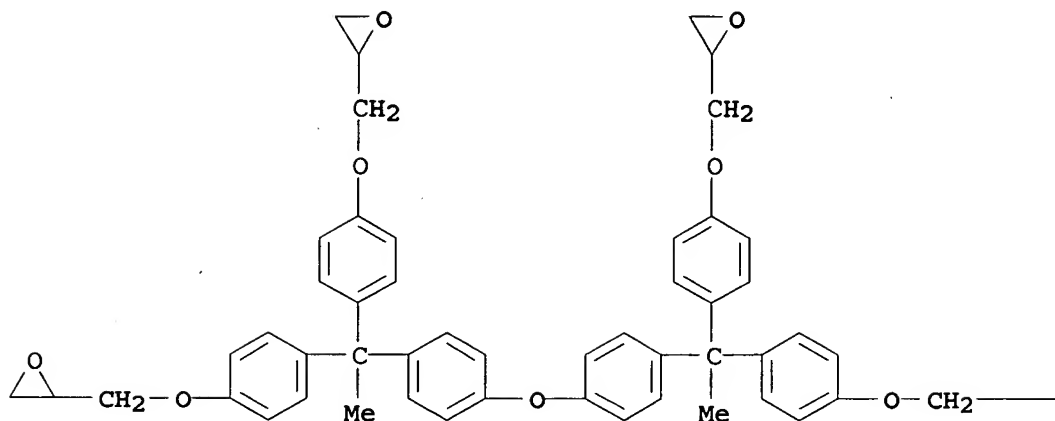
AB Title compns. with good **resistance** to soldering stress contain (A) epoxy resins containing 40-100% (based on total epoxy resin) tetrafunctional epoxy resins of general formula I (R1-2 = H, alkyl; R3-14 = H, halo, alkyl), (B) phenolic resin hardeners, (C) inorg. fillers, and (D) hardening accelerators. Thus, I (R1-2 = Me, R3-14 = H) (II) 16, o-cresol novolak epoxy resin (III) 4, phenol novolak resin 10, powdered fused SiO₂ 68.8, Ph3P 0.2, C black 0.5, and carnauba wax 0.5 parts were melt kneaded, crushed, and transfer molded to obtain potted test packages showing 0/16 and 0/16 cracks by treating them in solder bath after they were kept at 85° and 85% relative humidity for 48 h and 72 h, resp., and 50% malfunction after >400 h under pressure cooker conditions for the latter sample, vs. 4/16, 14/16, and 300 h, resp., for the composition containing 6 parts II and 14 parts III.

IT 140365-06-6
(potting compns. containing, with good **resistance** to soldering stress, for semiconductors)

RN 140365-06-6 HCAPLUS

CN Oxirane, 2,2',2'',2'''-[oxybis[4,1-phenyleneethylidynebis(4,1-phenyleneoxymethylene)]]tetrakis- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



- IC ICM C08G059-32
ICS C08L063-00; H01L023-29; H01L023-31
- CC 37-6 (Plastics Manufacture and Processing)
Section cross-reference(s): 76
- ST epoxy resin solder heat **resistance**; semiconductor potting
epoxy resin blend; crack **resistance** epoxy resin sealant;
heat **resistance** epoxy resin sealant
- IT Heat-**resistant** materials
(epoxy resin compns. containing phenolic resin hardeners and inorg.
fillers and hardening accelerators, for sealing semiconductors)
- IT Epoxy resins, uses
(potting compns., with good **resistance** to soldering
stress, for semiconductors)
- IT Phenolic resins, uses
(epoxy, novolak, potting compns., with good **resistance** to
soldering stress, for semiconductors)
- IT Potting compositions
(heat-**resistant**, epoxy resin compns. containing phenolic
resin hardeners and inorg. fillers and hardening accelerators, for
semiconductors)

IT Epoxy resins, uses
(phenolic, novolak, potting compns., with good resistance
to soldering stress, for semiconductors)

IT 140365-06-6
(potting compns. containing, with good resistance to
soldering stress, for semiconductors)

L61 ANSWER 38 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1992:31529 HCAPLUS

DOCUMENT NUMBER: 116:31529

TITLE: Vinylphenyl compounds, their preparation, and
polymerizable compositions, crosslinked polymers,
and optical disk substrates containing them

INVENTOR(S): Ueda, Masahide; Nakamura, Kanehiro; Matsumoto,
Yoshifumi; Kusaba, Mari

PATENT ASSIGNEE(S): Tokuyama Soda Co., Ltd., Japan

SOURCE: Eur. Pat. Appl., 31 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

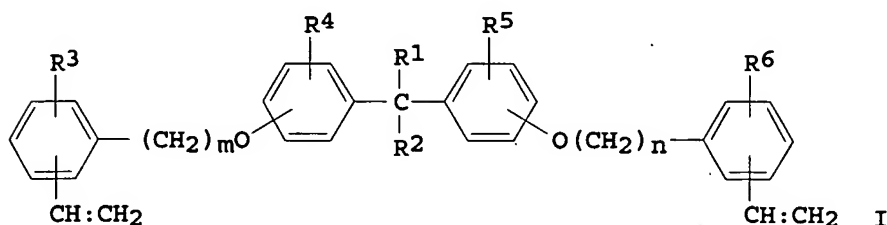
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 415729	A2	19910306	EP 1990-309424	19900829
			<--	
EP 415729	A3	19910828		
R: DE, FR, GB, NL				
JP 03163039	A	19910715	JP 1990-144490	19900604
			<--	
JP 2868844	B2	19990310		
US 5138001	A	19920811	US 1990-572454	19900827
			<--	
CA 2024187	A1	19910301	CA 1990-2024187	19900828
			<--	
PRIORITY APPLN. INFO.:			JP 1989-220360	A 19890829
			<--	
			JP 1990-144490	A 19900604
			<--	

OTHER SOURCE(S): MARPAT 116:31529

ED Entered STN: 24 Jan 1992

GI



AB The compds. have the general formula I, where R1 = C6-12 aryl or C7-10
aralkyl; R2-6 = H or C1-4 alkyl; and m, n ≥ 1.

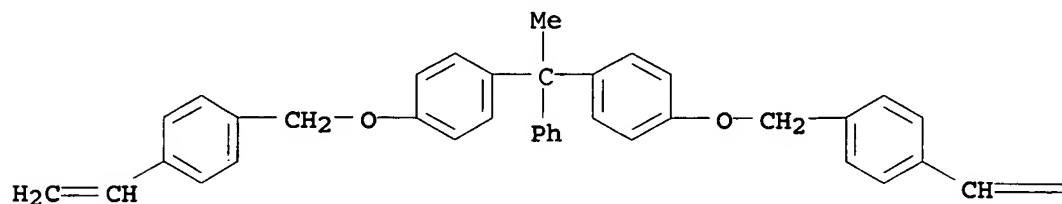
IT 135705-97-4P 135705-99-6P 135706-01-3P
135706-03-5P

(preparation of, for production of crosslinked polymers for optical disk substrates)

RN 135705-97-4 HCAPLUS

CN Benzene, 1,1'-(1-phenylethylidene)bis[4-[(4-ethenylphenyl)methoxy] -
(CA INDEX NAME)

PAGE 1-A



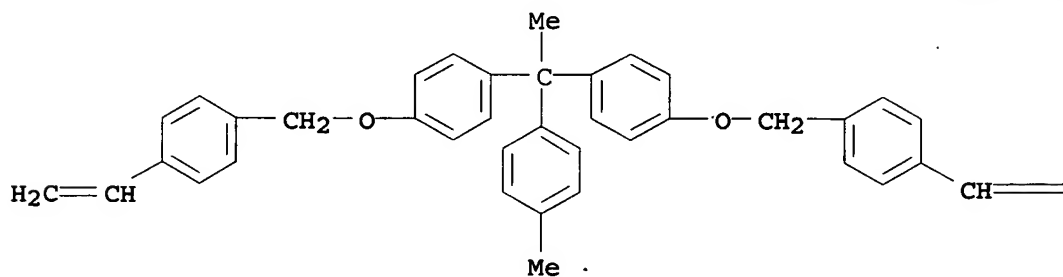
PAGE 1-B

=CH₂

RN 135705-99-6 HCAPLUS

CN Benzene, 1,1'-[1-(4-methylphenyl)ethylidene]bis[4-[(4-ethenylphenyl)methoxy] - (CA INDEX NAME)

PAGE 1-A

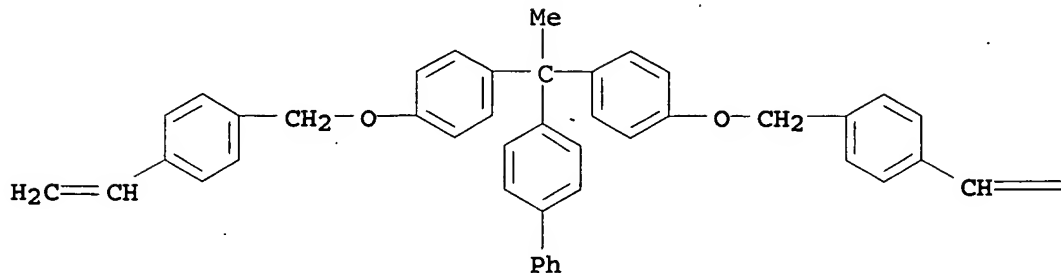


PAGE 1-B

=CH₂

RN 135706-01-3 HCAPLUS
 CN 1,1'-Biphenyl, 4-[1,1-bis[4-[(4-ethenylphenyl)methoxy]phenyl]ethyl]-(9CI) (CA INDEX NAME)

PAGE 1-A

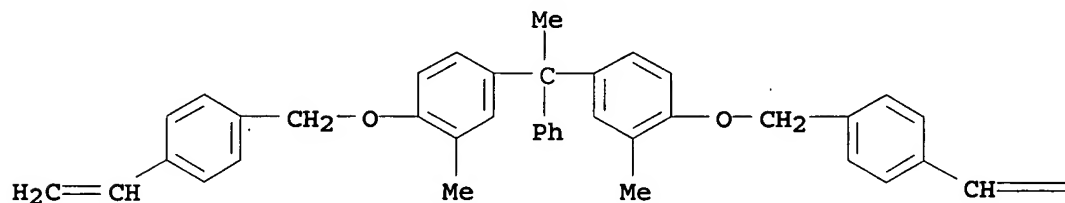


PAGE 1-B

=CH₂

RN 135706-03-5 HCAPLUS
 CN Benzene, 1,1'-(1-phenylethylidene)bis[4-[(4-ethenylphenyl)methoxy]-3-methyl- (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

=CH₂

IC ICM C07C043-215
 ICS C07C041-16; C08F212-34; G11B007-24

CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
 Section cross-reference(s): 38
 IT 135705-97-4P 135705-99-6P 135706-01-3P
 135706-03-5P 135706-05-7P 135706-07-9P 135742-91-5P
 135785-18-1P
 (preparation of, for production of crosslinked polymers for optical disk substrates)

L61 ANSWER 39 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1988:407157 HCAPLUS

DOCUMENT NUMBER: 109:7157

TITLE: Manufacture of heat-resistant polycarbonates with good mechanical properties

INVENTOR(S): Shigematsu, Kazuyoshi; Nakagawa, Takashi

PATENT ASSIGNEE(S): Idemitsu Kosan Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

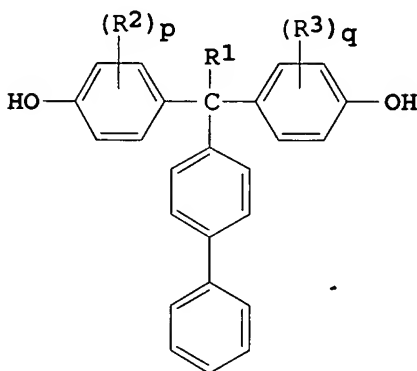
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 63039919	A	19880220	JP 1986-181852	19860804
			<--	
JP 2520097	B2	19960731		
PRIORITY APPLN. INFO.:			JP 1986-181852	19860804
			<--	

ED Entered STN: 09 Jul 1988

GI



I

AB Title polycarbonates (reduced viscosity ≥ 0.2 dL/g, at 20° 0.5 g/dL CH_2Cl_2) with good optical properties are prepared from dihydric phenols I ($\text{R}_1 = \text{H}$, C1-5 alkyl, aryl; $\text{R}_2, \text{R}_3 = \text{H}$, halogen, C1-5 alkyl, aryl; $p, q = 1-4$) with carbonate esters. Thus, acetylbiphenyl 50, PhOH 75, and thioacetic acid 5 g were stirred under HCl gas for 24 h and reacted 72 h to give 65 g 1-(4-biphenyl)-1,1-bis(4-hydroxyphenyl)ethane (m.p. 185°), 40 g of which in 2N aqueous NaOH was reacted with 250 mL/min COCl_2 for 25 min in the presence of

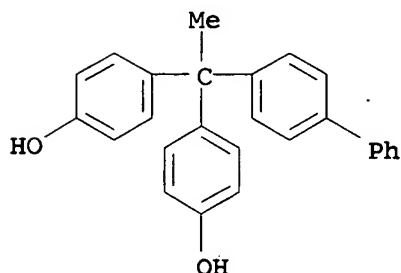
250 mL CH₂Cl₂ and 1.0 g p-tert-butylphenol, giving a transparent polymer (reduced viscosity 0.45 dL/g) with n_D20 1.6275.

IT 111203-78-2P

(preparation and polymerization of, for polycarbonates)

RN 111203-78-2 HCAPLUS

CN Phenol, 4,4'-(1-[1,1'-biphenyl]-4-ylethylidene)bis- (CA INDEX NAME)



IC ICM C08G063-62

ICS C08G063-62

CC 35-5 (Chemistry of Synthetic High Polymers)

Section cross-reference(s): 73

ST polycarbonate heat **resistant** mech strength; acetylbiphenyl phenol condensation; refractive index heat **resistant** polycarbonate

IT Heat-**resistant** materials

(aromatic polycarbonates, preparation of, for optical materials)

IT Transparent materials

(aromatic polycarbonates, preparation of, heat-**resistant**, with good mech. strength)

IT 111203-78-2P 114555-52-1P 114626-11-8P

(preparation and polymerization of, for polycarbonates)

L61 ANSWER 40 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1987:608935 HCAPLUS

DOCUMENT NUMBER: 107:208935

TITLE: Recording material

INVENTOR(S): Takashima, Masanobu; Satomura, Masato; Iwakura, Ken; Igarashi, Akira

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 3

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 62122783	A	19870604	JP 1985-263229	19851122
			<--	
GB 2184558	A	19870624	GB 1986-27800	19861120
			<--	
GB 2184558	B	19891018		
US 4707464	A	19871117	US 1986-933514	19861121
			<--	
PRIORITY APPLN. INFO.:			JP 1985-263228	A 19851122
			<--	

JP 1985-263229

A 19851122

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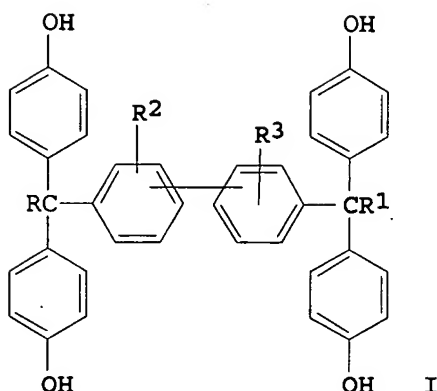
JP 1985-287068

A 19851220

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ED Entered STN: 27 Nov 1987

GI



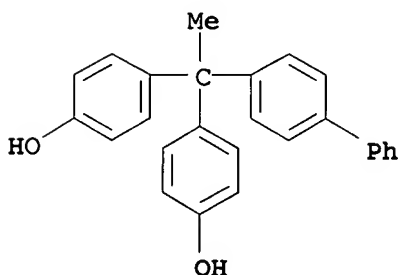
AB A recording material contains (1) an electron-donating uncolored dye precursor, and (2) and electron-accepting compound of the formula I (R, R1 = H, alkyl, aryl; R2, R3 = H, halo, alkyl, alkoxy). The material has high color developability, good storage stability, and good compatibility among the components in the imaging layer. The obtained dye image also has excellent stability. Thus, a color-former sheet having a coated layer which contains microcapsules of 2-anilino-3-methyl-6-diethylaminofluoran/alkylnaphthalene/gelation/gum arabic was combined with a developer sheet having a coated layer which incorporates 4,4'-bis(1,1-bis(4-hydroxyphenyl)ethyl)biphenyl/kaolin/poly(vinyl alc.) dispersion for pressure-sensitive recording. The results showed the advantages of the developer as described above.

IT 111203-78-2

(color developer, pressure-sensitive copying sheets containing leuco dye and)

RN 111203-78-2 HCAPLUS

CN Phenol, 4,4'-(1-[1,1'-biphenyl]-4-ylethylidene)bis- (CA INDEX NAME)



IC ICM B41M005-12

ICS B41M005-18

CC 74-11 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

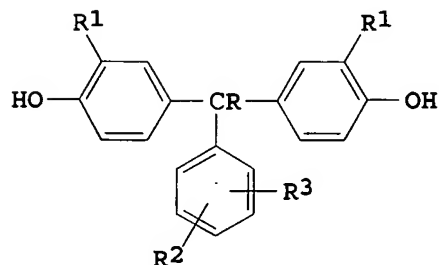
IT 111203-78-2 111203-79-3
(color developer, pressure-sensitive copying sheets containing leuco dye and)

L61 ANSWER 41 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1987:608934 HCAPLUS
 DOCUMENT NUMBER: 107:208934
 TITLE: Recording material
 INVENTOR(S): Takashima, Masanobu; Satomura, Masato; Iwakura, Ken; Igarashi, Akira
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 3
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 62122782	A	19870604	JP 1985-263228	19851122
			<--	
JP 07107005	B	19951115		
GB 2184558	A	19870624	GB 1986-27800	19861120
			<--	
GB 2184558	B	19891018		
US 4707464	A	19871117	US 1986-933514	19861121
			<--	
			JP 1985-263228	A 19851122
			<--	
			JP 1985-263229	A 19851122
			<--	
			JP 1985-287068	A 19851220
			<--	

PRIORITY APPLN. INFO.:

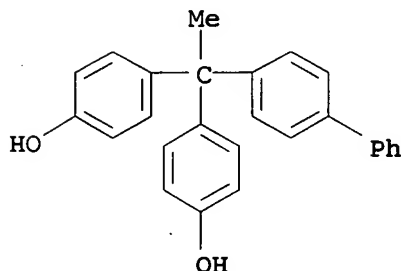
ED Entered STN: 27 Nov 1987
 GI



AB A recording material contains (1) an electron-donating uncolored dye precursor, and (2) an electron-accepting compound of the formula I (R = H, alkyl, aryl; R1 = H, lower alkyl, allyl, halo; R2 = aryl; R3 = H, halo, alkyl, alkoxy). The material has high color developability, good storage stability, and good compatibility among the components in the imaging layer. The obtained dye image has also excellent stability. Thus, a color former sheet having a coated layer containing

microcapsules of 2-anilino-3-methyl-6-diethylaminofluoran/alkylnaphthalene/gelatin/gum arabic was combined with a developer sheet having a coated layer containing 4-[1,1-bis(4-hydroxyphenyl)ethyl]biphenyl/kaolin/poly(vinyl alc.) dispersion for pressure-sensitive recording. The results showed the advantages of the developer as described above.

IT 111203-78-2
(color developer, pressure-sensitive copying sheets containing leuco dye and)
RN 111203-78-2 HCAPLUS
CN Phenol, 4,4'-(1-[1,1'-biphenyl]-4-ylethylidene)bis- (CA INDEX NAME)



IC ICM B41M005-12
ICS B41M005-18
CC 74-11 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
IT '80-05-7D, derivs. 111203-78-2 111203-79-3
(color developer, pressure-sensitive copying sheets containing leuco dye and)

L61 ANSWER 42 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1984:52546 HCAPLUS
DOCUMENT NUMBER: 100:52546
TITLE: Polyester molding compositions
PATENT ASSIGNEE(S): Asahi Chemical Industry Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 15 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

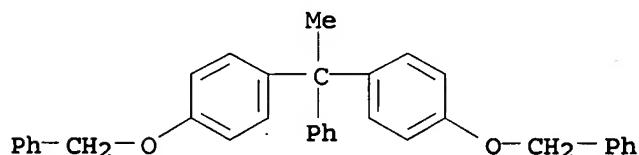
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 58093752	A	19830603	JP 1981-192297	19811130

PRIORITY APPLN. INFO.: JP 1981-192297 19811130
<--

ED Entered STN: 12 May 1984
AB Poly(ethylene terephthalate) (I) [25038-59-9] compns. having low volatile loss at high temps., and which can be molded at low temps. into articles having low heat shrinkage and high surface luster, contain 0.1-10% bisphenol diethers having mol. weight ≥ 300 , and 0.05-10% crystal nucleating agents, which may be polyamides and/or polyhydrazides which are solid and stable at 270°, alkali metal salts of aromatic oxysulfonic acids, and/or talc. Thus, I 100, talc 1, methylenebisphenol dibenzyl ether (II) [88484-11-1] 4, and chopped glass fibers 45 parts were mixed, pelletized, dried 5 h at

150°, and injection molded at 280° (mold temperature 110%) into test specimens having glossy surfaces, 0.6% volatile loss when pulverized and heated to 150° for 1 h, and heat shrinkage (specimens made at mold temperature 80°) 0.39% after 2 h at 150°, compared with rough surfaces, 0.3%, and 0.72%, resp., for a similar composition without II, and rough surfaces, 0.6%, and 0.75%, resp., for a similar composition without talc.

IT 88457-48-1
(crystallization accelerators, with crystal nucleating agents, for polyester moldings with low heat shrinkage)
RN 88457-48-1 HCAPLUS
CN Benzene, 1,1'-(1-phenylethylidene)bis[4-(phenylmethoxy)- (CA INDEX NAME)



IC C08L067-02; C08K003-34; C08K005-06; C08K005-42
ICI C08L067-02, C08L077-00
CC 37-6 (Plastics Manufacture and Processing)
ST polyethylene terephthalate low temp molding; heat shrinkage resistant polyester molding; talc crystal nucleating agent polyester; polyamide crystal nucleating agent polyester; polyhydrazide crystal nucleating agent polyester; oxysulfonate crystal nucleating agent polyester; ether bisphenol crystn accelerator polyester; phenol ether crystn accelerator polyester
IT 71338-01-7 87353-49-9 88216-41-5 88457-47-0 88457-48-1
88457-51-6 88457-52-7 88457-53-8 88480-41-5 88484-11-1
(crystallization accelerators, with crystal nucleating agents, for polyester moldings with low heat shrinkage)

L61 ANSWER 43 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1976:74649 HCAPLUS
DOCUMENT NUMBER: 84:74649
ORIGINAL REFERENCE NO.: 84:12267a,12270a
TITLE: Cardo polyesters from 2,2-bis(4-hydroxyphenyl)adamantane and its phenyl-substituted derivatives
AUTHOR(S): Papava, G. Sh.; Beridze, L. A.; Gelashvili, N. S.; Tsiskarishvili, P. D.
CORPORATE SOURCE: Inst. Fiz. Org. Khim. im. Melikishvili, Tiflis, USSR
SOURCE: Izvestiya Akademii Nauk Gruzinskoi SSR, Seriya Khimicheskaya (1975), 1(3), 235-42
CODEN: IGSKDH; ISSN: 0132-6074
DOCUMENT TYPE: Journal
LANGUAGE: Russian
ED Entered STN: 12 May 1984
GI For diagram(s), see printed CA Issue.
AB Polyesters, prepared by condensing dicarboxylic acids with 2,2-bis(4-hydroxyphenyl)adamantane (I, X = X' = H) (II) [52211-74-2], 2,2-bis(3-chloro-4-hydroxyphenyl)adamantane (I, X = Cl, X' = H) [58104-26-0], 2,2-bis(3,5-dichloro-4-hydroxyphenyl)adamantane (I, X = X' = Cl) [58104-27-1], or

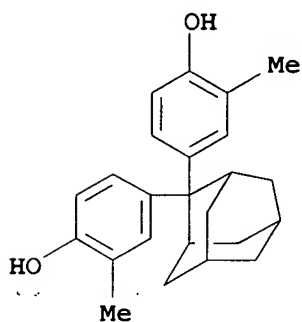
2,2-bis(3-methyl-4-hydroxyphenyl)adamantane (I, X = Me, X' = H) (III) [52211-75-3] have excellent heat resistance; heated in the air they start to lose weight at 380-400° and decompose at 500-580° without leaving residues. II and III can be prepared by condensing phenol [108-95-2] or o-cresol [95-48-7] with 2-adamantanone [700-58-3]. The chlorination of I (X = X' = H) give the mono- and dichloro derivs. Some polyesters prepared from I, e.g., poly(2,2-adamantylidenedi-p-phenylene terephthalate) [56316-07-5] or poly(2,2-adamantylidenedi-p-phenylene sebacate) [56316-05-3] are crystalline; other polyesters, e.g., poly(2,2-adamantylidenedi-p-phenylene isophthalate) [56316-06-4] or poly[2,2-adamantylidenebis(3,5-dichloro-4-phenylene)isophthalate] [58129-97-8] are amorphous.

IT 52211-75-3P 58104-26-0P 58104-27-1P

(preparation and polymerization of)

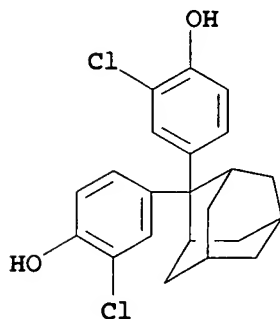
RN 52211-75-3 HCAPLUS

CN Phenol, 4,4'-tricyclo[3.3.1.1^{3,7}]decylidenebis[2-methyl- (9CI) (CA INDEX NAME)



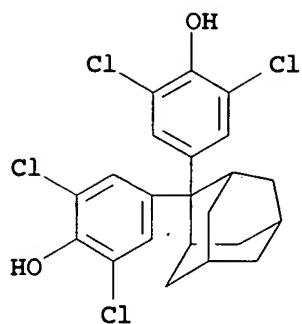
RN 58104-26-0 HCAPLUS

CN Phenol, 4,4'-tricyclo[3.3.1.1^{3,7}]decylidenebis[2-chloro- (9CI) (CA INDEX NAME)

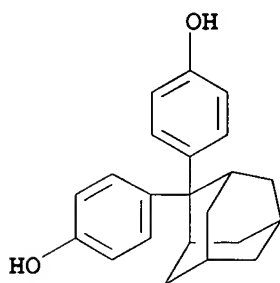


RN 58104-27-1 HCAPLUS

CN Phenol, 4,4'-tricyclo[3.3.1.1^{3,7}]decylidenebis[2,6-dichloro- (9CI) (CA INDEX NAME)



IT 52211-74-2P
 (preparation and reactions of)
 RN 52211-74-2 HCAPLUS
 CN Phenol, 4,4'-tricyclo[3.3.1.1.3,7]decylidenebis- (CA INDEX NAME)



CC 35-3 (Synthetic High Polymers)
 ST adamantane deriv polyester; heat resistant polyester
 adamantylidenediphenylene; hydroxyphenyladamantane deriv polyester
 IT Heat-resistant materials
 (adamantane ring-containing cardo polyesters)
 IT 52211-75-3P 58104-26-0P 58104-27-1P
 (preparation and polymerization of)
 IT 52211-74-2P
 (preparation and reactions of)

L61 ANSWER 44 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1975:515498 HCAPLUS

DOCUMENT NUMBER: 83:115498

ORIGINAL REFERENCE NO.: 83:18159a,18162a

TITLE: Cardo polycondensation polymers from
 2,2-bis(4-hydroxyphenyl)adamantane

AUTHOR(S): Beridze, L. A.; Maisuradze, N. A.; Abnerova, S.
 V.; Dokhturishvili, N. S.; Papava, G. Sh.;
 Tsiskarishvili, P. D.; Gelashvili, N. S.;
 Vinogradova, S. V.; Korshak, V. V.

CORPORATE SOURCE: USSR

SOURCE: Sint. Svoistva Nek. Nov. Polim. Mater. (
 1974), 19-30. "Metsniereba": Tiflis,
 USSR.

CODEN: 30UJA2

DOCUMENT TYPE: Conference

LANGUAGE: Russian

ED Entered STN: 12 May 1984

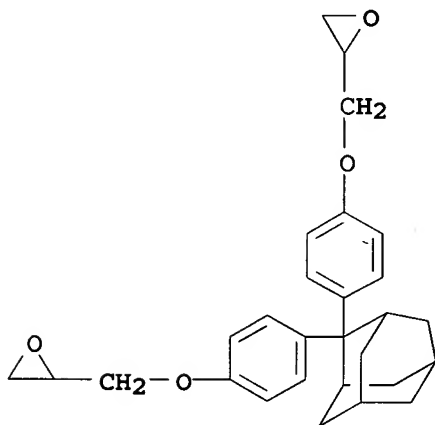
AB Condensation of 2-adamantanone [700-58-3] with phenol [108-95-2] in presence of HCl gave 2,2-bis(4-hydroxyphenyl)adamantane (I) [52211-74-2] which was converted to polyesters, epoxy resins, and copolymers with formaldehyde. Polycondensation at 150-220° in α -chloronaphthalene was used for preparation of 2,2-bis(4-hydroxyphenyl)adamantane-terephthaloyl chloride copolymer (II) [56315-64-1], and 2,2-bis(4-hydroxyphenyl)adamantane-isophthaloyl chloride copolymer (III) [56315-63-0] and 2,2-bis(4-hydroxyphenyl)adamantane-sebacoyl chloride copolymer (IV) [56315-62-9] were prepared by polycondensation at 50° in acetone. Crystalline II and III were amorphized by reprecipitation. The softening points of II and III were .apprx.370-420° as compared to 110-30° for IV. Condensation of I with epichlorohydrin gave 2,2-bis(4-hydroxyphenyl)adamantane diglycidyl ether [56323-07-0] which was crosslinked by 4,4'-oxybis(phthalic anhydride) [1823-59-2] and m-phenylenediamine [108-45-2]. 2,2-Bis(4-hydroxyphenyl)adamantane-formaldehyde copolymer [56315-61-8] was obtained in the resol and resite forms.

IT 56323-07-0P

(crosslinking and preparation of)

RN 56323-07-0 HCAPLUS

CN Oxirane, 2,2'-[tricyclo[3.3.1.1^{3,7}]decylidenebis(4,1-phenyleneoxymethylene)]bis- (CA INDEX NAME)

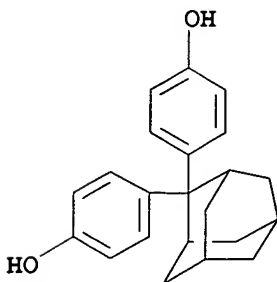


IT 52211-74-2P

(preparation and polymerization of)

RN 52211-74-2 HCAPLUS

CN Phenol, 4,4'-tricyclo[3.3.1.1^{3,7}]decylidenebis- (CA INDEX NAME)



CC 36-3 (Plastics Manufacture and Processing)
Section cross-reference(s): 24, 25

IT Epoxy resins
(bis(hydroxyphenyl)adamantane diglycidyl ether, crosslinking and
heat resistance of)

IT Phenolic resins
(bis(hydroxyphenyl)adamantane-formaldehyde copolymers, heat
resistance and preparation of)

IT 56323-07-0P
(crosslinking and preparation of)

IT 56315-64-1 56316-07-5
(crystallinity and heat resistance of)

IT 56315-61-8 56315-62-9 56315-63-0 56316-05-3 56316-06-4
(heat resistance of)

IT 52211-74-2P
(preparation and polymerization of)

=> d his nofile

(FILE 'HOME' ENTERED AT 09:28:07 ON 03 DEC 2007)

FILE 'HCAPLUS' ENTERED AT 09:28:15 ON 03 DEC 2007

L1 1 SEA ABB=ON PLU=ON US20050271971/PN
SEL RN

FILE 'REGISTRY' ENTERED AT 09:28:35 ON 03 DEC 2007

L2 20 SEA ABB=ON PLU=ON (108-46-3/BI OR 110-87-2/BI OR
125748-07-4/BI OR 156281-11-7/BI OR 1927-95-3/BI OR
211427-64-4/BI OR 24424-99-5/BI OR 27955-94-8/BI OR
29654-55-5/BI OR 5001-18-3/BI OR 5292-43-3/BI OR 623-05-2/B
I OR 65338-98-9/BI OR 683227-72-7/BI OR 683227-73-8/BI OR
683227-74-9/BI OR 683227-75-0/BI OR 683227-76-1/BI OR
75-07-0/BI OR 99181-50-7/BI)

L3 STR

L4 0 SEA SSS SAM L3

L5 4 SEA ABB=ON PLU=ON L2 AND TRICYCLO

L6 STR 5001-18-3

L7 50 SEA SSS SAM L6

L8 SCR 1992 OR 2021 OR 2016 OR 2026

L9 50 SEA SSS SAM L6 NOT L8

L10 STR L6

L11 STR L10

L12 STR L11

L13 STR L12

L14 0 SEA SSS SAM L13

L15 0 SEA SSS SAM L13 NOT L8

FILE 'LREGISTRY' ENTERED AT 10:27:10 ON 03 DEC 2007

L16 STR L13

L17 2 SEA SSS SAM L16 NOT L8

L18 STR L16

FILE 'REGISTRY' ENTERED AT 10:31:48 ON 03 DEC 2007

L19 0 SEA SSS SAM L16

L20 1 SEA SSS SAM L16 NOT L8

L21 0 SEA ABB=ON PLU=ON L2 AND PMS/CI

L22 SCR 2043

L23 1 SEA SSS SAM L16 NOT (L8 OR L22)

FILE 'REGISTRY' ENTERED AT 10:34:20 ON 03 DEC 2007

L24 STR L16

FILE 'LREGISTRY' ENTERED AT 10:43:49 ON 03 DEC 2007

L25 STR L24

L26 STR 5001-18-3

L27 9 SEA SSS SAM L26

L28 STR L26

L29 42 SEA SSS SAM L28

L30 STR L28

L31 50 SEA SSS SAM L30

FILE 'REGISTRY' ENTERED AT 11:11:44 ON 03 DEC 2007

L32 50 SEA SSS SAM L30

L33 50 SEA SSS SAM L28

L34 50 SEA SSS SAM L26

L35 STR L28

L36 50 SEA SSS SAM L35
L37 50 SEA SSS SAM L35 NOT L8
L38 STR L35
L39 50 SEA SSS SAM L38 NOT (L8 OR L22)
L40 STR
L41 50 SEA SSS SAM L38 NOT (L8 OR L22)
L42 16441 SEA SSS FUL L38 NOT (L8 OR L22)
L43 7 SEA ABB=ON PLU=ON L42 AND L2
SAV L42 LEE208/A
L44 50 SEA SUB=L42 SSS SAM L40
L45 50 SEA SUB=L42 SSS SAM L6
L46 STR L6
L47 50 SEA SUB=L42 SSS SAM L46
L48 STR L40
L49 50 SEA SUB=L42 SSS SAM L48
L50 STR L38
L51 50 SEA SUB=L42 SSS SAM L50
L52 STR L50
L53 33 SEA SUB=L42 SSS SAM L52
L54 744 SEA SUB=L42 SSS FUL L52
L55 2 SEA ABB=ON PLU=ON L54 AND L2
SAV L54 LEE208A/A

FILE 'HCAPLUS' ENTERED AT 12:17:29 ON 03 DEC 2007

L56 426 SEA ABB=ON PLU=ON L54
L57 1 SEA ABB=ON PLU=ON L1 AND L56
L58 30 SEA ABB=ON PLU=ON L56 AND PHOTOG?/SC, SX
L59 55 SEA ABB=ON PLU=ON L56 AND ?RESIST?
L60 66 SEA ABB=ON PLU=ON L58 OR L59
L61 44 SEA ABB=ON PLU=ON L60 AND (1840-2003)/PRY,AY,PY



SCIENTIFIC REFERENCE Bldg
Sci & Tech Inf. Ctr

NOV 28 REC'D

Access DB# 244270

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Pat & T.M. Office

Art Unit: 1795

Phone Number 302-1333

Examiner #: 76060 Date: 11-26-'09

Serial Number: 10/531,208

Mail Box and Bldg/Room Location: 9C15 Results Format Preferred (circle): PAPER DISK E-MAIL

(Rem)

If more than one search is submitted, please prioritize searches in order of need.

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: _____

Plz. see B.6.

Inventors (please provide full names): _____

Earliest Priority Filing Date: _____

**For Sequence Searches Only* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*

Please search for the compound of

cl. #25

Use date and cost where applicable



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CONFIRMATION NO. 6424

Bib Data Sheet

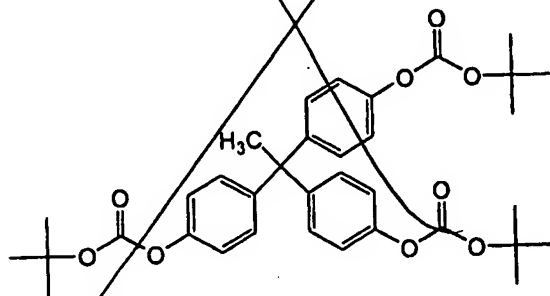
SERIAL NUMBER 10/531,208	FILING OR 371(c) DATE 04/14/2005 RULE	CLASS 430	GROUP ART UNIT 1756	ATTORNEY DOCKET NO. 28955.1048	
APPLICANTS Mitsuru Ueda, Tokyo, JAPAN; Hirotoishi Ishii, Chiba, JAPAN;					
** CONTINUING DATA ***** This application is a 371 of PCT/JP03/11137 09/01/2003 SJL					
** FOREIGN APPLICATIONS ***** JAPAN 2002300144 10/15/2002) SJL JAPAN 2003112458 04/17/2003)					
Foreign Priority claimed <input checked="" type="checkbox"/> yes <input type="checkbox"/> no 35 USC 119 (a-d) conditions met <input checked="" type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> Met after Allowance Verified and Acknowledged <i>[Signature]</i> SJL Examiner's Signature Initials		STATE OR COUNTRY JAPAN	SHEETS DRAWING	TOTAL CLAIMS 20	INDEPENDENT CLAIMS 3
ADDRESS 27890					
TITLE Photoresist base material, method for purification thereof, and photoresist compositions					
FILING FEE RECEIVED 900	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:		<input type="checkbox"/> All Fees <input type="checkbox"/> 1.16 Fees (Filing) <input type="checkbox"/> 1.17 Fees (Processing Ext. of time) <input type="checkbox"/> 1.18 Fees (Issue) <input type="checkbox"/> Other _____ <input type="checkbox"/> Credit		

which R, RO- and ROCO are extreme ultra-violet reactive groups or groups having reactivity to the action of a chromophore active to extreme ultra-violet,

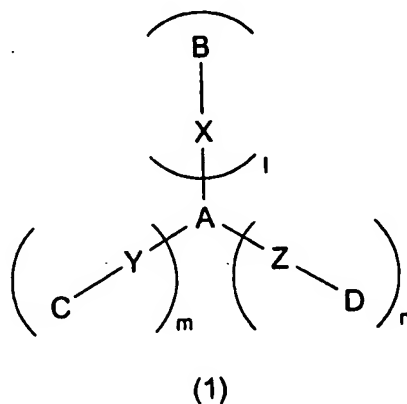
wherein each of X, Y and Z is independently a single bond or an ether bond, and

$l + m + n = 2, 3 \text{ or } 4$;

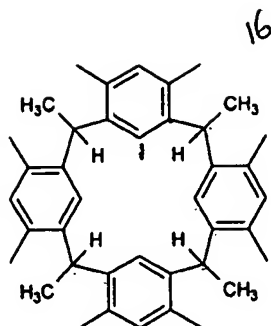
provided that excluded is the organic compound represented as follows



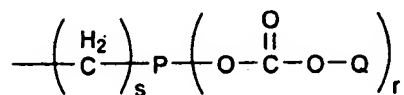
25. (New) A photoresist base material comprising an extreme ultra-violet reactive organic compound represented by the following general formula (1),



wherein A is an organic group represented by

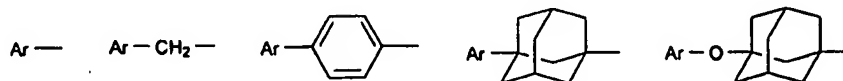


wherein each of B, C and D is selected from the group consisting of tert-butyl, 1-tetrahydropyranylyl, 1-tetrahydrofuranylyl, 1-ethoxyethyl, 1-phenoxyethyl, an organic group represented by



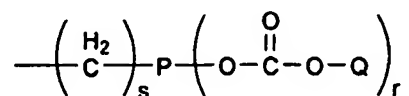
wherein P is an aromatic group having a valence of (r + 1) and having 6 to 20 carbon atoms, Q is an organic group having 4 to 30 carbon atoms, r is an integer of 1 to 10 and s is an integer of 0 to 10,

and an organic group selected from the group consisting of



wherein Ar is a phenyl or naphthyl group substituted with RO- and/or ROCO- in which R is selected from the group consisting of hydrogen, tert-butyl, tert-

butyloxycarbonylmethyl, tert-butyloxycarbonyl, 1-tetrahydropyranyl, 1-tetrahydrofuranyl, 1-ethoxyethyl, 1-phenoxyethyl and an organic group represented by



wherein P is an aromatic group having a valence of (r + 1) and having 6 to 20 carbon atoms, Q is an organic group having 4 to 30 carbon atoms, r is an integer of 1 to 10 and s is an integer of 0 to 10,

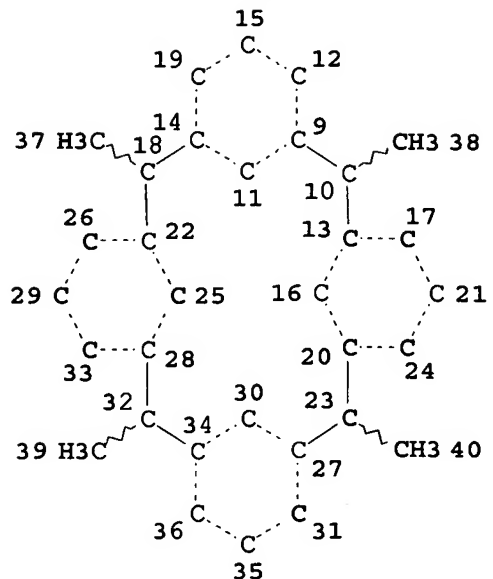
and wherein each of X, Y and Z is independently a single bond or an ether bond,

and

$$l + m + n = 8.$$

=> d que
L4

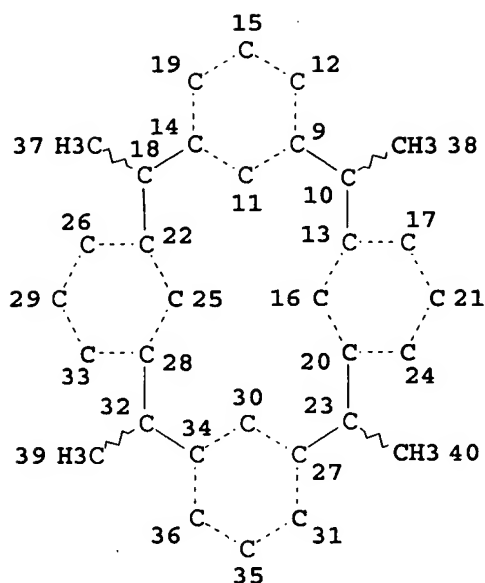
STR



NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RSPEC I
NUMBER OF NODES IS 32

STEREO ATTRIBUTES: NONE
L6 STR



Ak~O~CH2
41 42 @43

Cb~O~CH2
44 45 @46

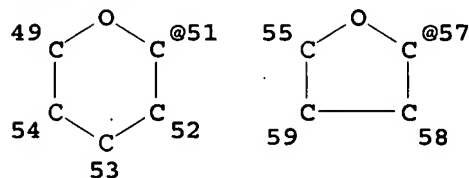
G1 74

t-Bu~O
47 @48
50

66
O
||
Ak~Cb~O~C~O~Ak
60 61 62 63 64 @65

73
O
||
Cb~O~C~O~Ak
68 69 70 71 @72

Page 1-A



Page 2-A

VAR G1=43/46/48/51/57/65/72

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RSPEC I

NUMBER OF NODES IS 65

STEREO ATTRIBUTES: NONE

L8 15797 SEA FILE=REGISTRY ABB=ON PLU=ON 11417.1.2/RID
 L9 907 SEA FILE=REGISTRY SSS FUL L4
 L12 76 SEA FILE=REGISTRY SUB=L9 SSS FUL L6
 L13 54 SEA FILE=REGISTRY ABB=ON PLU=ON L12 NOT 1-100/N
 L15 114651 SEA FILE=REGISTRY ABB=ON PLU=ON 638.8.1/RID
 L16 2 SEA FILE=REGISTRY ABB=ON PLU=ON L9 AND L15
 L17 165 SEA FILE=REGISTRY ABB=ON PLU=ON L8 AND L15
 L18 2 SEA FILE=REGISTRY ABB=ON PLU=ON L17 AND L9
 L21 630432 SEA FILE=REGISTRY ABB=ON PLU=ON 46.157.1/RID
 L24 525267 SEA FILE=REGISTRY ABB=ON PLU=ON 16.138.1/RID

L25 292 SEA FILE=REGISTRY ABB=ON PLU=ON L8 AND (L21 OR L24)
 L26 5 SEA FILE=REGISTRY ABB=ON PLU=ON L25 AND L9
 L28 2 SEA FILE=REGISTRY ABB=ON PLU=ON L17 AND TETRAMETHYLPENTA
 CYCLO?
 L29 617 SEA FILE=REGISTRY ABB=ON PLU=ON L8 AND TETRAMETHYLPENTAC
 YCLO?
 L30 289 SEA FILE=REGISTRY ABB=ON PLU=ON L29 NOT 1-100/N
 L31 51 SEA FILE=HCAPLUS ABB=ON PLU=ON L13
 L32 2 SEA FILE=HCAPLUS ABB=ON PLU=ON L16
 L33 2 SEA FILE=HCAPLUS ABB=ON PLU=ON L18
 L34 5 SEA FILE=HCAPLUS ABB=ON PLU=ON L26
 L35 2 SEA FILE=HCAPLUS ABB=ON PLU=ON L28
 L36 55 SEA FILE=HCAPLUS ABB=ON PLU=ON (L31 OR L32 OR L33 OR L34
 OR L35)
 L38 44 SEA FILE=HCAPLUS ABB=ON PLU=ON L36 AND (1840-2003)/PRY,AY
 ,PY
 L39 252 SEA FILE=HCAPLUS ABB=ON PLU=ON L30
 L40 37 SEA FILE=HCAPLUS ABB=ON PLU=ON L39(L) PHOTO?
 L41 27 SEA FILE=HCAPLUS ABB=ON PLU=ON L40 AND ?RESIST?
 L42 22 SEA FILE=HCAPLUS ABB=ON PLU=ON L41 AND (1840-2003)/PRY,AY
 ,PY
 L43 9 SEA FILE=HCAPLUS ABB=ON PLU=ON L42 AND L38
 L44 44 SEA FILE=HCAPLUS ABB=ON PLU=ON L38 OR L43

=> d l44 ibib ed abs hitstr hitind

L44 ANSWER 1 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2005:563698 HCAPLUS

DOCUMENT NUMBER: 143:106359

TITLE: Acid-labile acetal group-containing
 calix[4]resorcinarenes and chemically amplified
 resists containing them

INVENTOR(S): Nishikubo, Tadaomi; Kudo, Hiroto

PATENT ASSIGNEE(S): JSR Ltd., Japan; Kanagawa University

SOURCE: Jpn. Kokai Tokkyo Koho, 16 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

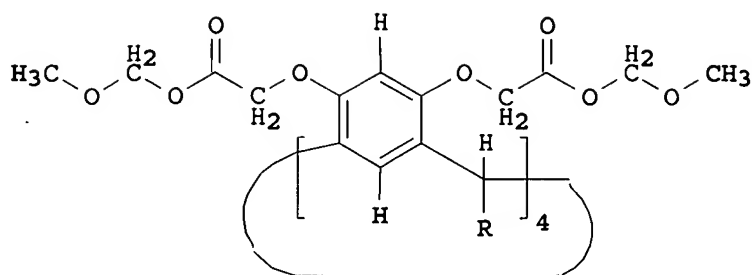
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005170902	A	20050630	JP 2003-416509	20031215

PRIORITY APPLN. INFO.:

JP 2003-416509 20031215

ED Entered STN: 30 Jun 2005

GI



I

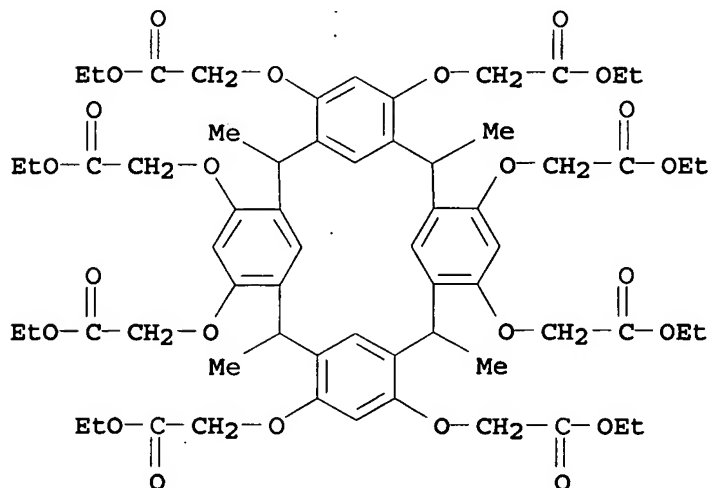
AB The calix[4]resorcinarenes are I (R = Me, 4-MeOCH₂O₂CCH₂OC₆H₄). The resists contain I and photoacid generators. The I show good solubility in casting solvents, and good resistance to heat and alkali developers, resulting in forming high-resolution patterns.

IT 171799-35-2P

(acid-labile acetal group-containing calixresorcinarenes for chemical amplified resists)

RN 171799-35-2 HCAPLUS

CN Acetic acid, 2,2',2'',2''',2''''',2''''',2''''',2''''''-[[2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacos-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octayl]octakis(oxy)]octakis-, 1,1',1'',1''',1''''',1''''',1''''',1''''''-octaethyl ester (CA INDEX NAME)

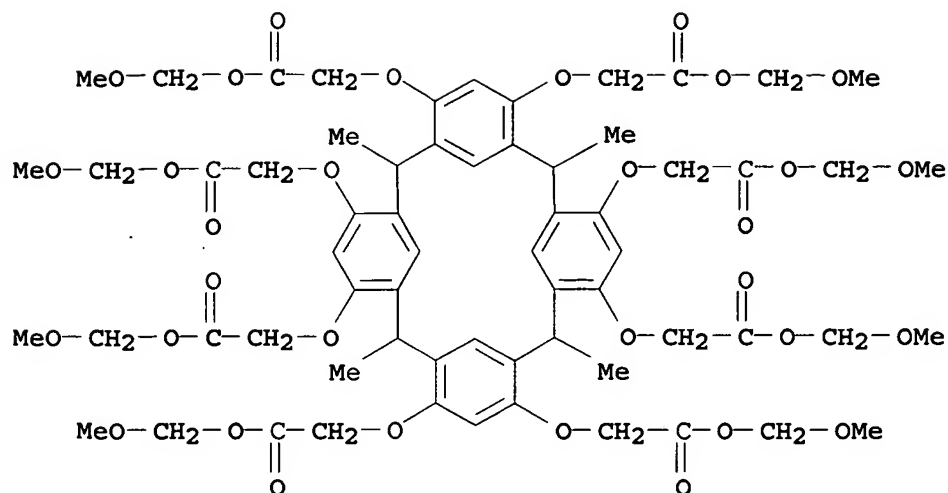


IT 830329-30-1P

(acid-labile acetal group-containing calixresorcinarenes for chemical amplified resists)

RN 830329-30-1 HCAPLUS

CN Acetic acid, 2,2',2'',2''',2''''',2''''',2''''',2''''''-[(2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacos-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octayl]octakis(oxy)]octakis-, octakis(methoxymethyl) ester (9CI) (CA INDEX NAME)



IC ICM C07C069-736
ICS G03F007-039; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 25
IT 65338-98-9P 130508-38-2P 171799-35-2P 176897-13-5P
710970-56-2P 830329-32-3P
(acid-labile acetal group-containing calixresorcinarenes for chemical amplified resists)
IT 830329-30-1P 830329-31-2P
(acid-labile acetal group-containing calixresorcinarenes for chemical amplified resists)

=> d 144 2-44 ibib ed abs hitstr hitind

L44 ANSWER 2 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:778878 HCAPLUS

DOCUMENT NUMBER: 141:295753

TITLE: Calixresorcinarenes, their preparation, and refractive index-changing materials and photothermal energy conversion-storage materials containing them

INVENTOR(S): Nishikubo, Tadaomi; Kudo, Hiroto

PATENT ASSIGNEE(S): Kanagawa University, Japan; JSR Ltd.

SOURCE: Jpn. Kokai Tokkyo Koho, 34 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004262822	A	20040924	JP 2003-54243	20030228

PRIORITY APPLN. INFO.:

JP 2003-54243 20030228

OTHER SOURCE(S): MARPAT 141:295753

ED Entered STN: 24 Sep 2004

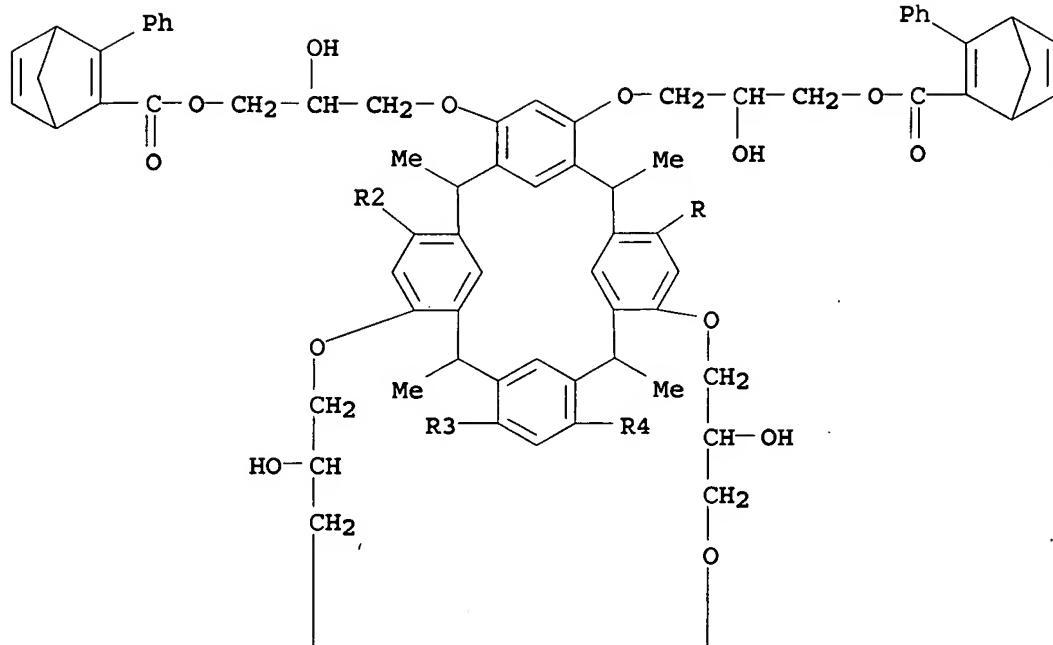
USHA SHRESTHA EIC 1700 REM 4B31

GI

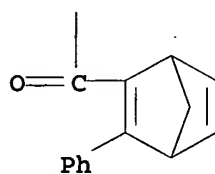
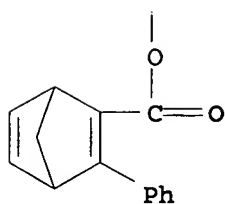
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

- AB Calixresorcinarenes I [R1 = Q1, Q2, CH₂CH(OH)CH₂O₂CCH:CHPh; R2 = C1-16 alkyl, C₆H₄-p-OR1], useful for refractive index-changing materials and light-heat energy conversion-storage materials, are manufactured by reaction of II (R3 = glycidyl; R4 = C1-16 alkyl, C₆H₄-p-OR3) with 3-phenyl-2,5-norbornadiene-2-carboxylic acid (PNC), 2-(benzofuran-2-yl)-7,7-dimethyl-3-(5-carboxythiophen-2-yl)-5,6-bis(trifluoromethyl)-2,5-norbornadiene, or cinnamic acid. Resorcinol was treated with paraldehyde to give C-methyl-calixresorcin[4]arene, which was etherified with epibromohydrin in NMP in the presence of Cs₂CO₃ and tetrabutylammonium bromide (TBAB) at 50° for 48 h to give C-methyl-25,29,33,37,41,45,49,52-octakis(glycidyoxy)calixresorcin[4]arene II (R3 = glycidyl, R4 = Me) (III) in 60% yield. III was esterified with PNC in NMP in the presence of TBAB at 70° for 48 h to give I (R1 = Q1, R2 = Me) (IV) in 40% yield. IV was converted from the norbornadiene structure into the quadricyclane structure by photoisomerization and showed refractive index 1.683 and 1.633 before and after 20-min UV irradiation with a 250-W Hg lamp, resp., heat storage 85.5 kJ/mol (231 J/g), and 5% weight-loss temperature 344.0°.
- IT 760213-79-4P 760978-04-9P.
(preparation of calixresorcinarenes useful for refractive index-changing materials and photothermal energy-converting materials)
- RN 760213-79-4 HCAPLUS
- CN Bicyclo[2.2.1]hepta-2,5-diene-2-carboxylic acid, 3-phenyl-, (2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacos-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octayl)octakis[oxy(2-hydroxy-3,1-propanediyl)] ester (9CI) (CA INDEX NAME)

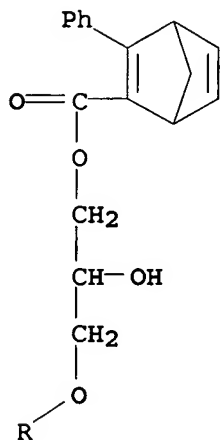
PAGE 1-A



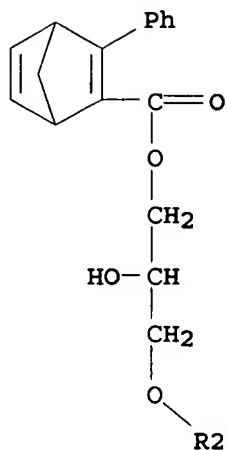
PAGE 2-A



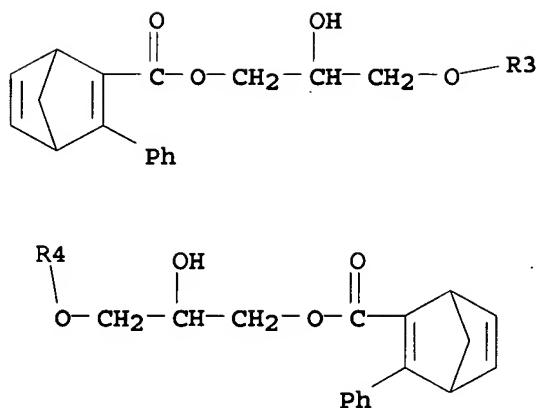
PAGE 3-A



PAGE 4-A



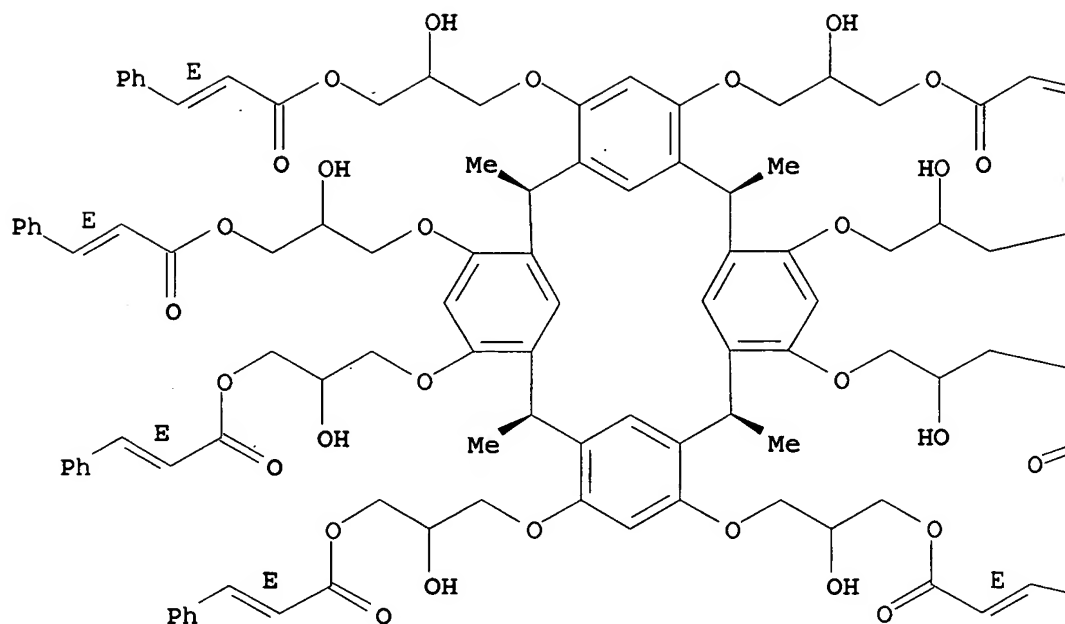
PAGE 5-A



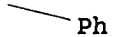
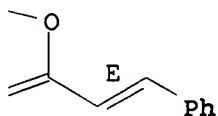
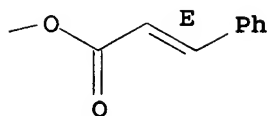
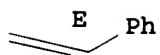
RN 760978-04-9 HCAPLUS
 CN 2-Propenoic acid, 3-phenyl-, (2,8,14,20-tetramethylpentacyclo[19.3.1.1.1.3,7.19,13.115,19]octacos-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octayl)octakis[oxy(2-hydroxy-3,1-propanediyl)] ester, stereoisomer (9CI) (CA INDEX NAME)

Relative stereochemistry.
 Double bond geometry as shown.

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PAGE 1-B



IT 65338-98-9P 343784-07-6P

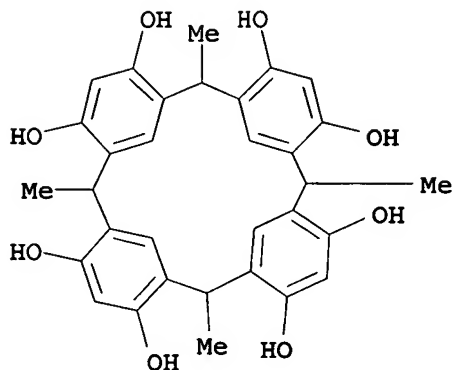
(preparation of calixresorcinarenes useful for refractive index-changing materials and photothermal energy-converting materials)

RN 65338-98-9 HCAPLUS

CN Pentacyclo[19.3.1.13,7.19,13.115,19]octacos-
1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-

USHA SHRESTHA EIC 1700 REM 4B31

4,6,10,12,16,18,22,24-octol, 2,8,14,20-tetramethyl- (CA INDEX NAME)

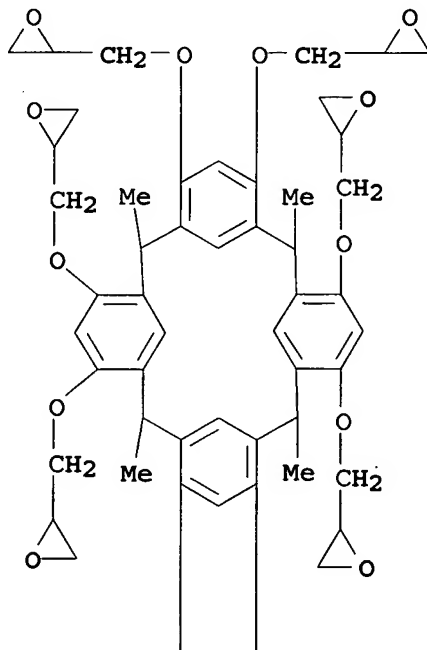


RN 343784-07-6 HCAPLUS

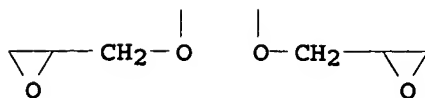
CN Oxirane, 2,2',2'',2''',2'''',2''''',2''''',2''''''-[(2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacosal(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octayl)octakis(oxyethylene)]octakis-

(CA INDEX NAME)

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PAGE 2-A



IC ICM C07C069-753
ICS C07C069-003; C07C069-618; C07D409-08
CC 25-29 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)
Section cross-reference(s): 28, 52, 73.
IT Heat storage
Heat-resistant materials
Refractive index
Solar collectors
(preparation of calixresorcinarenes useful for refractive index-changing materials and photothermal energy-converting materials)
IT 760213-79-4P 760213-80-7P 760978-04-9P
760978-05-0P 761459-25-0P 761459-27-2P
(preparation of calixresorcinarenes useful for refractive index-changing materials and photothermal energy-converting materials)
IT 65338-98-9P 176897-13-5P 203714-14-1P 343784-07-6P
760213-81-8P 760213-82-9P
(preparation of calixresorcinarenes useful for refractive index-changing materials and photothermal energy-converting materials)

L44 ANSWER 3 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:355223 HCAPLUS

DOCUMENT NUMBER: 140:383102

TITLE: Photoresist base material, method for purification thereof, and photoresist compositions containing the same

INVENTOR(S): Ueda, Mitsuru; Ishii, Hirotoshi

PATENT ASSIGNEE(S): Idemitsu Kosan Co., Ltd., Japan

SOURCE: PCT Int. Appl., 56 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004036315	A1	20040429	WO 2003-JP11137	20030901
WO 2004036315	B1	20040603		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BE, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
JP 2004191913	A	20040708	JP 2003-112458	20030417

USHA SHRESTHA EIC 1700 REM 4B31

AU 2003261865 A1 20040504 AU 2003-261865 20030901

EP 1553451 A1 20050713 EP 2003-808872 20030901

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,
PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK
CN 1688939 A 20051026 CN 2003-824240 20030901

US 2005271971 A1 20051208 US 2005-531208 20050414

PRIORITY APPLN. INFO.:

JP 2002-300144 A 20021015

JP 2003-112458 A 20030417

WO 2003-JP11137 W 20030901

OTHER SOURCE(S): MARPAT 140:383102

ED Entered STN: 30 Apr 2004

AB The invention relates to **photoresist** base materials consisting of extreme UV sensitive-organic compds. represented by the general formula (B-X)_l(C-Y)_m(D-Z)_nA: [wherein A is a central structure consisting of an aliphatic group having C1-50, an aromatic group having C6-50 carbon, an organic group bearing both, or an organic group having a cyclic structure formed by repetition of these groups; B to D are each an extreme UV sensitive group, a group exhibiting a reactivity on the action of a chromophore sensitive to extreme UV rays, a C1-50 aliphatic or C6-50 aromatic group having such a group, an organic group having both groups, or a substituent having a branched structure; X to Z are each a single bond or an ether linkage; l to n are integers of 0-5 satisfying the relationship: $l + m + n \leq 1$; and A to D may each have a heteroatom-bearing substituent]. The invention provides **photoresist** base materials and **photoresist** compns. which enable ultrafine lithog. with extreme UV rays or the like and is suitable for use in semiconductor device fabrication.

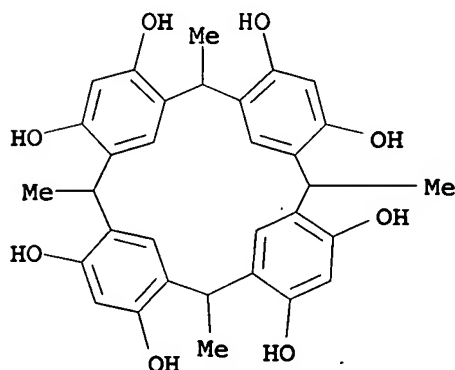
IT 65338-98-9DP, tetrahydropyranyl and benzyl derivative ethers

211427-64-4P 683227-74-9P

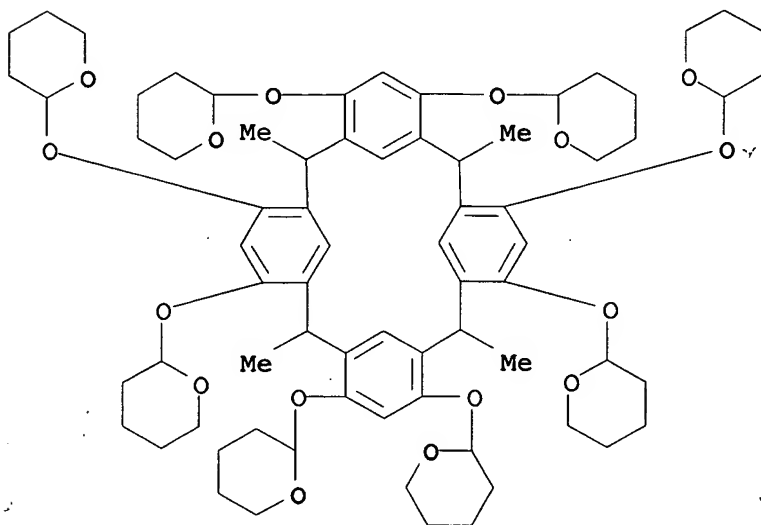
(photoresist base material, method for purification thereof, and photoresist compns. containing the same)

RN 65338-98-9 HCAPLUS

CN Pentacyclo[19.3.1.13,7.19,13.115,19]octacosal-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octol, 2,8,14,20-tetramethyl- (CA INDEX NAME)

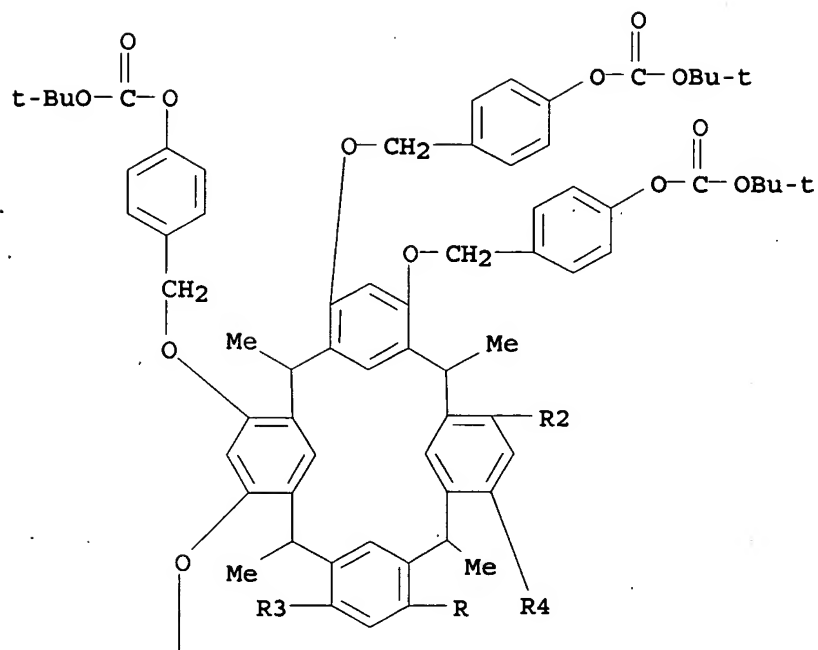


RN 211427-64-4 HCAPLUS
 CN 2H-Pyran, 2,2',2'',2''',2''''',2''''',2''''',2''''''-[(2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacos-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octayl)octakis(oxy)]octakis[tetrahydro- (9CI) (CA INDEX NAME)

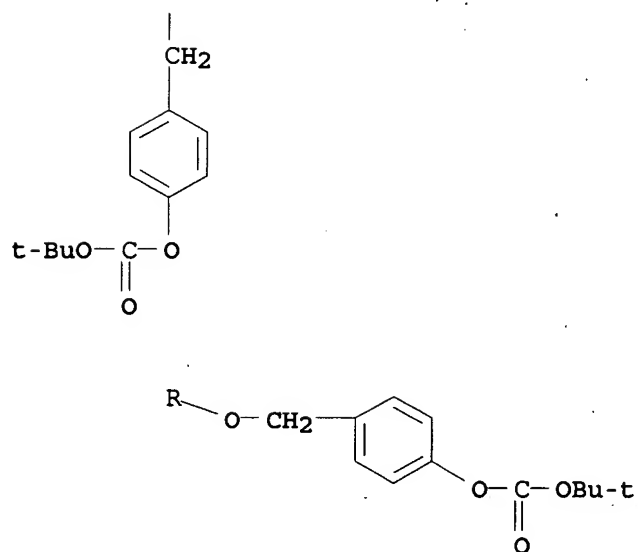


RN 683227-74-9 HCAPLUS
 CN Carbonic acid, (2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacos-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octayl)octakis(oxymethyl-4,1-phenylene) octakis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)

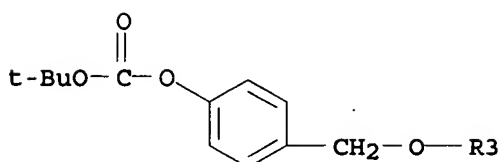
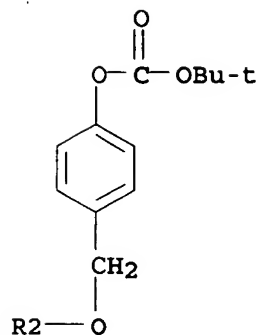
PAGE 1-A



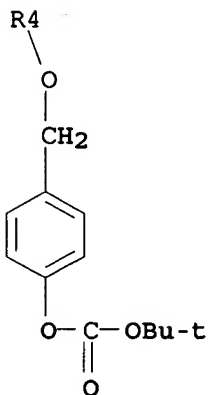
PAGE 2-A



PAGE 3-A



PAGE 4-A



- IC ICM G03F007-039
ICS C07C039-17; C07C069-736; C07D309-04
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 76
ST **photoresist** compn
IT Light-sensitive materials
 Photoresists
 Recrystallization
 Semiconductor device fabrication
 (**photoresist** base material, method for purification thereof,
 and **photoresist** compns. containing the same)
IT Distillation
 (vacuum; **photoresist** base material, method for purification

thereof, and photoresist compns. containing the same)

IT 65338-98-9DP, tetrahydropyranyl and benzyl derivative ethers
 125748-07-4P, Calix[4]resorcinarene 211427-64-4P
 683227-72-7P 683227-73-8P 683227-74-9P 683227-75-0P
 683227-76-1P
 (photoresist base material, method for purification thereof,
 and photoresist compns. containing the same)

IT 75-07-0, Acetaldehyde, reactions 108-46-3, Resorcinol, reactions
 110-87-2, Dihydro-2H-pyran 623-05-2, 4-Hydroxybenzyl alcohol
 1927-95-3, 4-Bromophenyl acetate 5001-18-3, 1,3-Dihydroxyadamantane
 5292-43-3, tert-Butyl bromoacetate 24424-99-5, Di-tert-butyl
 dicarbonate 27955-94-8 29654-55-5, 3,5-Dihydroxybenzylalcohol
 99181-50-7, 1,3,5-Trihydroxyadamantane
 (photoresist base material, method for purification thereof,
 and photoresist compns. containing the same)

IT 156281-11-7P, 4-(tert-Butoxycarbonyloxy)benzylalcohol
 (photoresist base material, method for purification thereof,
 and photoresist compns. containing the same)

REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR
 THIS RECORD. ALL CITATIONS AVAILABLE IN THE
 RE FORMAT

L44 ANSWER 4 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:101399 HCAPLUS

DOCUMENT NUMBER: 140:172186

TITLE: Method for producing electronic device such as
 semiconductor device using photolithography

INVENTOR(S): Fukuda, Hiroshi; Yokoyama, Yoshiyuki; Hattori,
 Takashi; Sakamizu, Toshio; Arai, Tadashi;
 Shiraishi, Hiroshi

PATENT ASSIGNEE(S): Hitachi, Ltd., Japan

SOURCE: PCT Int. Appl., 79 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004012012	A1	20040205	WO 2002-JP7760	20020730

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W: CN, JP, KR, US

RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE,

IT, LU, MC, NL, PT, SE, SK, TR

JP 3927575	B2	20070613	JP 2004-524096	20020730
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US 2006105273	A1	20060518	US 2005-523247	20050916
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PRIORITY APPLN. INFO.: WO 2002-JP7760 W 20020730

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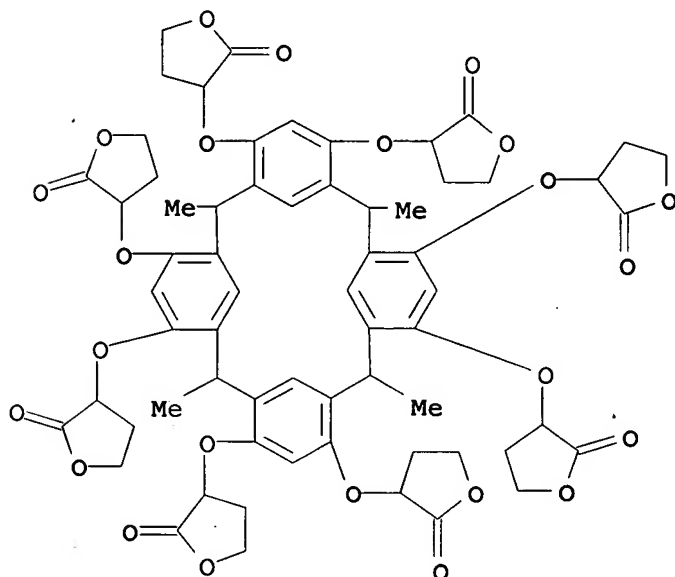
ED Entered STN: 08 Feb 2004

AB When the accuracy required for the dimensions of semiconductor circuit
 pattern approaches the mol. size of resist as the pattern becomes
 finer, device performance deteriorates due to edge roughness of the
 resist pattern to have an adverse effect on the system performance.
 This problem is solved by employing supermols. having smaller
 dimensions than those of conventional polymer as a principal
 component, making the number of reactions required for mol. solubility
 variation constant and as large as possible, and increasing the acid

IT 655233-37-7P
(method for producing electronic device)

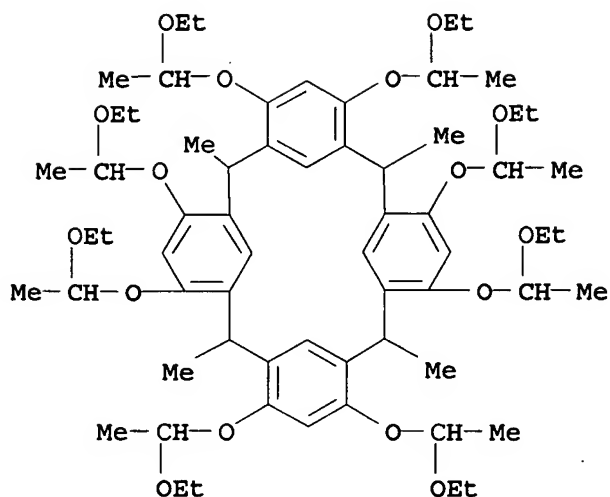
CN 2 (3H) -Furanone, 3,3',3'',3''',3'''',3''''',3''''',3''''''-

[(2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacos-
1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-
4,6,10,12,16,18,22,24-octayl)octakis(oxy)]octakis[dihydro- (9CI) (CA
INDEX NAME)



RN 655233-32-2 HCAPLUS

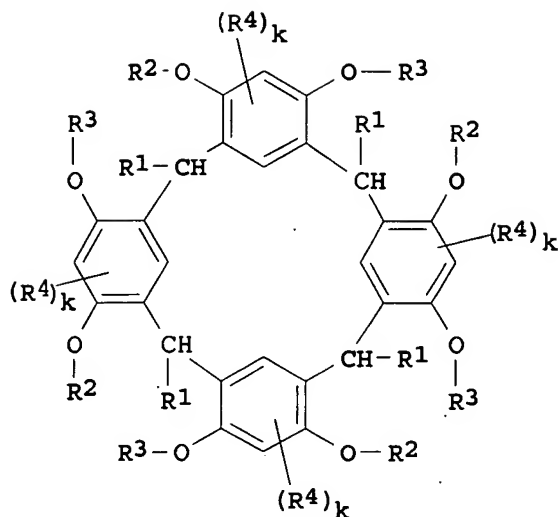
CN Pentacyclo[19.3.1.13,7.19,13.115,19]octacosal-
1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene,
4,6,10,12,16,18,22,24-octakis(1-ethoxyethoxy)-2,8,14,20-tetramethyl-
(CA INDEX NAME)



IC ICM G03F007-039
 ICS G03F007-004; H01L021-3213; G03F001-08; H01L021-027
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
 Section cross-reference(s): 76
 IT 655233-37-7P 655233-51-5P 655235-97-5P
 (method for producing electronic device)
 IT 99685-96-8DP, Fullerene C60, reaction product with tert-Bu bromoacetate 655233-22-0P 655233-32-2P 655233-43-5P
 655233-47-9P 655233-59-3P 655233-66-2P 655233-79-7P
 655233-86-6P 655233-96-8P 655235-99-7P 655236-01-4P
 (method for producing electronic device)
 REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L44 ANSWER 5 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 2004:57508 HCAPLUS
 DOCUMENT NUMBER: 140:112493
 TITLE: Calix resorcinarene derivatives soluble in various solvents and their heat-resistant flat films free from crystallization
 INVENTOR(S): Momota, Junji; Onishi, Hironori
 PATENT ASSIGNEE(S): Tokuyama Corp., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 30 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004018421	A	20040122	JP 2002-173350	20020613
PRIORITY APPLN. INFO.:				
			JP 2002-173350	20020613
OTHER SOURCE(S): MARPAT 140:112493				
ED Entered STN: 23 Jan 2004				
GI				



I

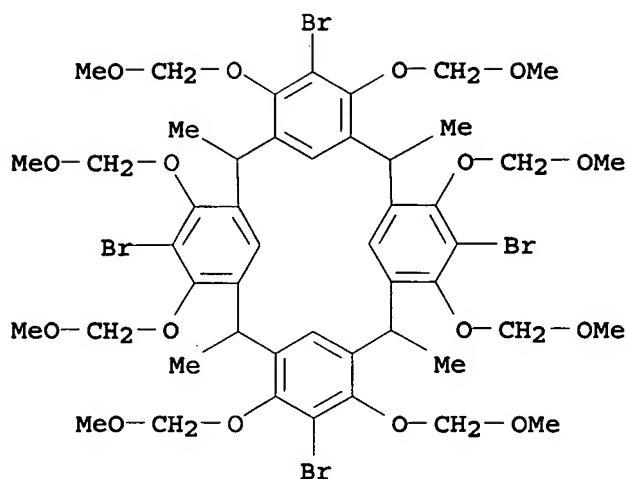
AB Calix resorcinarene derivs., useful for neg. electron beam resist materials, are represented by general formula I [R1-R3 = H, group shown as (a) C1-20 alkyl, amino, OH, aryl, aryloxy, etc., (b) C6-20 aryl, halo, amino, OH, aryl, aryloxy, etc., (c) C2-20 saturated aliphatic acyl, aromatic acyl, (d) YZ (Y = bond, divalent organic group; Z = ethenyl, halogenoalkyl); R2 ≠ R3 ≠ H; R4 = C1-20 (un)substituted alkyl halo; k = 0, 1, 2]. Thus, 0.6 mol resorcinol was reacted with 0.2 mol paraformaldehyde to yield 5 g of a white solid of an intermediate, then it (3.67 mmol) was esterified with 33 mmol methacryloyl chloride to yield 2.7 g of a white solid of I [R1 = Me, R2 = R3 = C(O)CMe:CH2; k = 0 (II)] showing good solubility in various solvents. Propylene glycol monomethyl ether solution of II gave a flat film free from crystals by spin coating on glass plate followed by drying. A mixture comprising II 50, tetraethylene glycol dimethacrylate 45, α-methylstyrene 5, α-methylstyrene dimer 1, and Perbutyl ND (tert-butylperoxy neodecanoate) was cast-polymerized while heating up from 30° to 90° to give 2-mm thick test pieces showing high hardness and thermal stability.

IT 646475-11-8P 646475-16-3P 646475-31-2P

(solvent-soluble polymerizable calix resorcinarene derivs. for neg. EB resist materials and their heat-resistant crystal-free flat films)

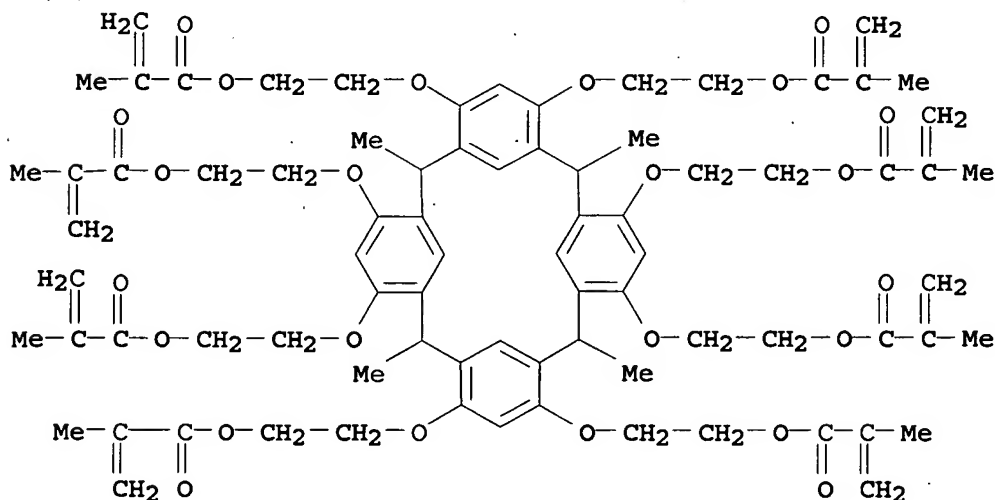
RN 646475-11-8 HCAPLUS

CN Pentacyclo[19.3.1.13,7.19,13.115,19]octacos-
1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene,
5,11,17,23-tetrabromo-4,6,10,12,16,18,22,24-octakis(methoxymethoxy)-
2,8,14,20-tetramethyl- (CA INDEX NAME)



RN 646475-16-3 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, (2,8,14,20-tetramethylpentacyclo[19.3.1.1.1.3,7.19,13.115,19]octacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octayl)octa-2,1-ethanediyl ester (9CI) (CA INDEX NAME)



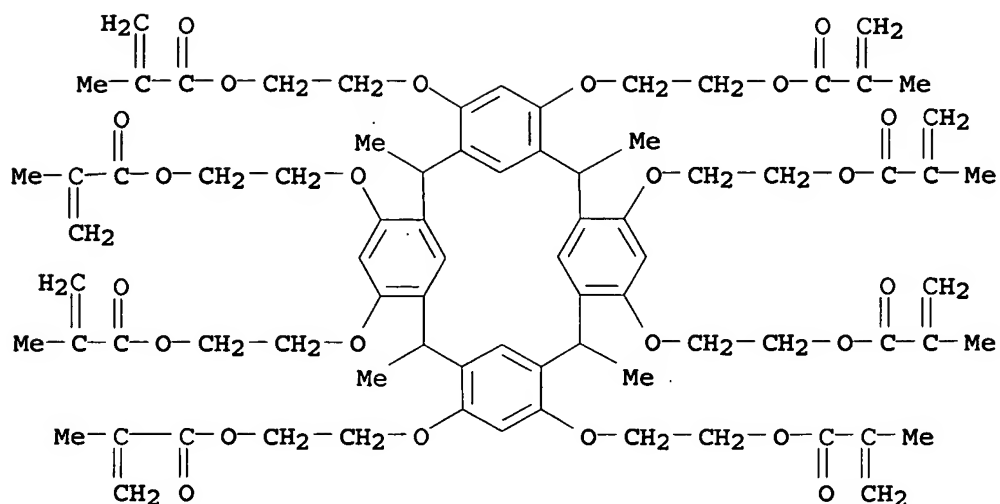
RN 646475-31-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, (2,8,14,20-tetramethylpentacyclo[19.3.1.1.1.3,7.19,13.115,19]octacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octayl)octakis(oxy-2,1-ethanediyl) ester, polymer with (1-methylethenyl)benzene and oxybis(2,1-ethanediyl)oxy-2,1-ethanediyl bis(2-methyl-2-propenoate) (9CI) (CA INDEX NAME)

CM 1

CRN 646475-16-3

CMF C80 H96 O24

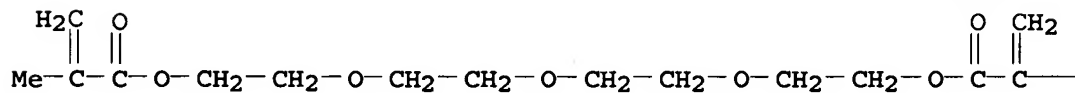


CM 2

CRN 109-17-1

CMF C16 H26 O7

PAGE 1-A



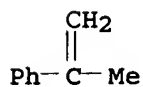
PAGE 1-B

— Me

CM 3

CRN 98-83-9

CMF C9 H10



IC ICM C07C069-54
 ICS C07C043-215; C07C043-225; C07C043-307; C08F016-32; C08F020-20;
 C08J005-18; C08L029-10; C08L033-04
 CC 38-3 (Plastics Fabrication and Uses)
 Section cross-reference(s): 37, 74

IT 646474-80-8P 646474-81-9P 646474-83-1P 646474-87-5P
 646474-89-7P 646474-91-1P 646474-94-4P 646474-98-8P
 646475-02-7P 646475-08-3P 646475-11-8P 646475-14-1P
 646475-16-3P 646475-18-5P 646475-20-9P 646475-22-1P
 646475-24-3P 646475-26-5P 646475-29-8P 646475-31-2P
 646475-33-4P

(solvent-soluble polymerizable calix resorcinarene derivs. for neg. EB resist materials and their heat-resistant crystal-free flat films)

L44 ANSWER 6 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2003:879781 HCAPLUS

DOCUMENT NUMBER: 139:388462

TITLE: tert-Butoxycarbonylalkoxycalixresorcinarenes having high solubility in casting solvents and radiation-sensitive positive resists containing the same

INVENTOR(S): Nishikubo, Tadaomi; Kudo, Hiroto

PATENT ASSIGNEE(S): JSR Ltd., Japan; Kanagawa University

SOURCE: Jpn. Kokai Tokkyo Koho, 18 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003321423	A	2003/11/11	JP 2002-133996	20020509

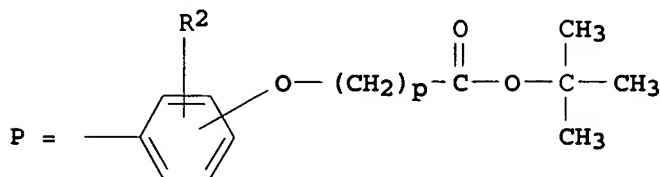
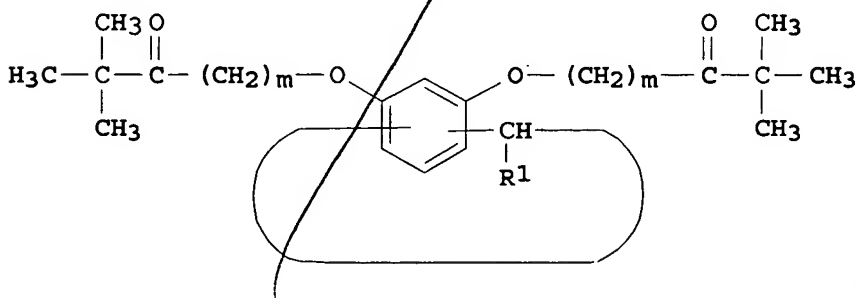
PRIORITY APPLN. INFO.:

JP 2002-133996 20020509
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OTHER SOURCE(S): MARPAT 139:388462

ED Entered STN: 11 Nov 2003

GI



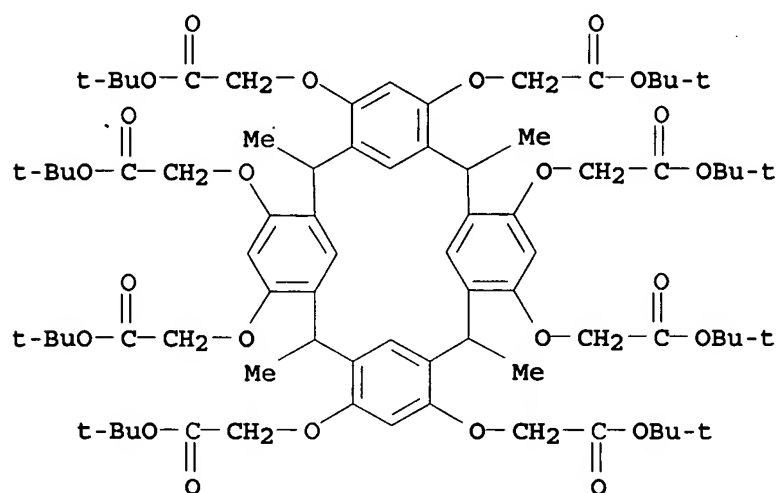
AB The compds. I (R1 = C1-18 alkyl, P; R2 = H, C1-15 alkoxy; m, p = 0-2; n = 4-12) and resists containing I and radiation-sensitive acid generators are sep. claimed. The resists produce high-resolution patterns for fabrication of integrated circuits.

IT 623159-10-4P

(tert-butoxycarbonylalkoxycalixresorcinarenes having high solvent solubility for liable pos.-working radiation-sensitive resists)

RN 623159-10-4 HCAPLUS

CN Acetic acid, 2,2',2'',2''',2''''',2''''',2''''',2''''''-[(2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacos-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octayl)octakis(oxy)octakis-, octakis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



IC ICM C07C069-712

ICS C08G061-02; G03F007-039; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s) : 25

IT	623159-05-7P	623159-06-8P	623159-07-9P	623159-08-0P
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623159-10-4P 623159-12-6P 623159-13-7P 623159-14-8P

623159-15-9P

(tert-butoxycarbonylalkoxycalixresorcinarenes having high solvent solubility for liable pos.-working radiation-sensitive resists)

L44 ANSWER 7 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2003:850922 HCAPLUS

DOCUMENT NUMBER: 140:391316

TITLE: Effective Synthesis of β -Ketophosphonate

Derivatives of Calix[4]resorcinolarenes

Prosvirkin, A. V.; Kazakova, E. Kh.; Ha

L.; Fedorenko, S. V.; Mustafina, A. R.; Konovalov,

A. I.

CORPORATE SOURCE: Kazan Research Center, Arbuzov Institute of

Organic Chemistry, Russian Academy of Sciences,

Tatarstan, Kazan, Russia

SOURCE: Russian Journal of General Chemistry (Translation of Zhurnal Obshchei Khimii) (2003).

73 (6), 918-920

ED Entered STN: 30 Oct 2003

IT 171799-35-2

RN 171799-35-2 HCAPLUS

CC 29-7 (Organometallic and Organometalloidal Compounds)

Section cross-reference(s) : 25

IT 171799-35-2 685702-03-8

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L44 ANSWER 8 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2002:867239 HCAPLUS

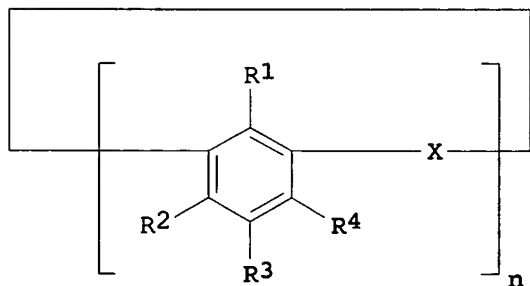
DOCUMENT NUMBER: 137:377437

USHA SHRESTHA EIC 1700 REM 4B31

INVENTOR(S): Ueda, Mitsuru; Shibazaki, Yuji; Fujigaya, Takehiko; Kwon, Yong Gil
 PATENT ASSIGNEE(S): Jsr Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002328473	A	20021115	JP 2001-134962	20010502
			<--	
PRIORITY APPLN. INFO.:			JP 2001-134962	20010502
			<--	

OTHER SOURCE(S): MARPAT 137:377437
 ED Entered STN: 15 Nov 2002
 GI



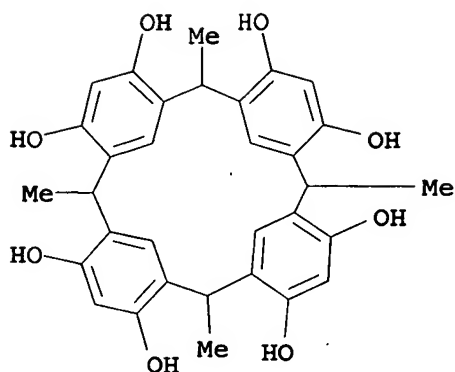
I

AB The compns. comprise (A) cyclic polyphenolic compds. I (R1-4 = H, OH, halo, alkyl, aryl, aralkyl, alkoxy, alkenyl, acyl, alkoxy carbonyl, alkyloxy, aryloxy, cyano, nitro; ≥ 1 of R1-4 is tert-butoxycarbonyloxy; X = direct bond, CR5R6; R5-6 = H, alkyl, aryl; n = integer of 3-8) and (B) radiation-sensitive acid generators. The compns. have high resolution and high sensitivity.

IT 65338-98-9DP, tert-butoxycarbonyl derivs. 65338-98-9P
 (calixarene-acid generator compns. for pos.-working photoresists)

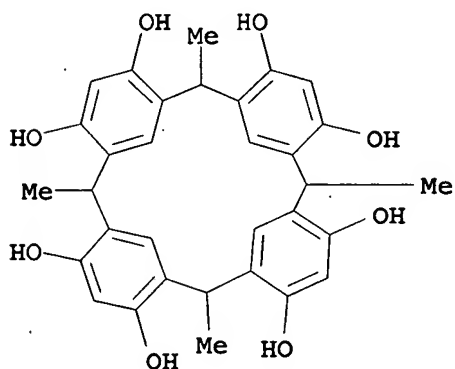
RN 65338-98-9 HCAPLUS

CN Pentacyclo[19.3.1.13,7.19,13.115,19]octacos-
 1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-
 4,6,10,12,16,18,22,24-octol, 2,8,14,20-tetramethyl- (CA INDEX NAME)



RN 65338-98-9 HCAPLUS

CN Pentacyclo[19.3.1.13,7.19,13.115,19]octacos-
1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-
4,6,10,12,16,18,22,24-octol, 2,8,14,20-tetramethyl- (CA INDEX NAME)

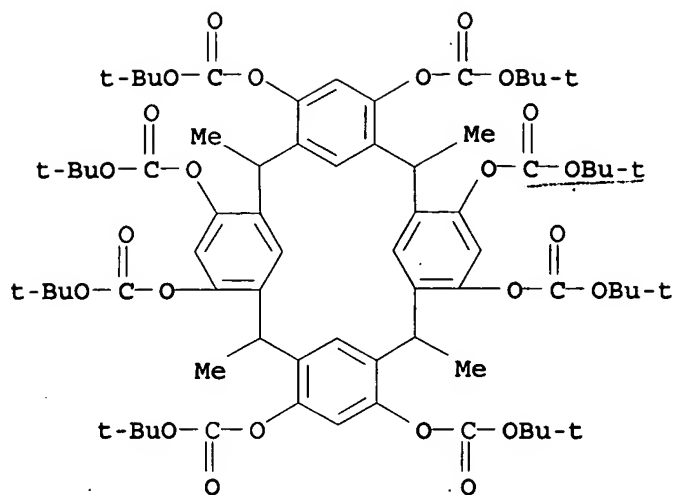


IT 250715-31-2P

(calixarene-acid generator compns. for pos.-working
photoresists)

RN 250715-31-2 HCAPLUS

CN Carbonic acid, 2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacos-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octayl octakis(1,1-dimethylethyl) ester (9CI)
(CA INDEX NAME)



- IC ICM G03F007-039
ICS G03F007-004; H01L021-027
- CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 38
- ST methylcalixresorcinarene acid generator pos **photoresist**;
calixarene acid generator compn pos **photoresist**
- IT **Positive photoresists**
(calixarene-acid generator compns. for pos.-working **photoresists**)
- IT **65338-98-9DP**, tert-butoxycarbonyl derivs. **65338-98-9P**
(calixarene-acid generator compns. for pos.-working **photoresists**)
- IT **250715-31-2P**
(calixarene-acid generator compns. for pos.-working **photoresists**)
- IT 75-07-0, Acetaldehyde, reactions 108-46-3, Resorcinol, reactions 24424-99-5, Di-tert-butyl dicarbonate
(calixarene-acid generator compns. for pos.-working **photoresists**)
- IT 137308-86-2, Diphenyliodonium 9,10-dimethoxyanthracene-2-sulfonate
(radiation-sensitive acid generator; calixarene-acid generator compns. for pos.-working **photoresists**)

L44 ANSWER 9 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2002:737648 HCAPLUS

DOCUMENT NUMBER: 138:237886

TITLE: Synthesis of methylene-bridged cyclic resorcinol oligomer

AUTHOR(S): Li, Daixin; Yamagishi, Tadaaki; Nakamoto, Yoshiaki

CORPORATE SOURCE: Graduate School of Natural Science and Technology, Kanazawa University, Kanazawa, 920-8867, Japan

SOURCE: Nettowaku Porima (2002), 23(3), 134-141

CODEN: NPORF2; ISSN: 1342-0577

PUBLISHER: Gosei Jushi Kogyo Kyokai

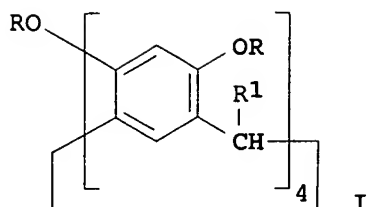
DOCUMENT TYPE: Journal

LANGUAGE: Japanese

OTHER SOURCE(S): CASREACT 138:237886

ED Entered STN: 30 Sep 2002

GI



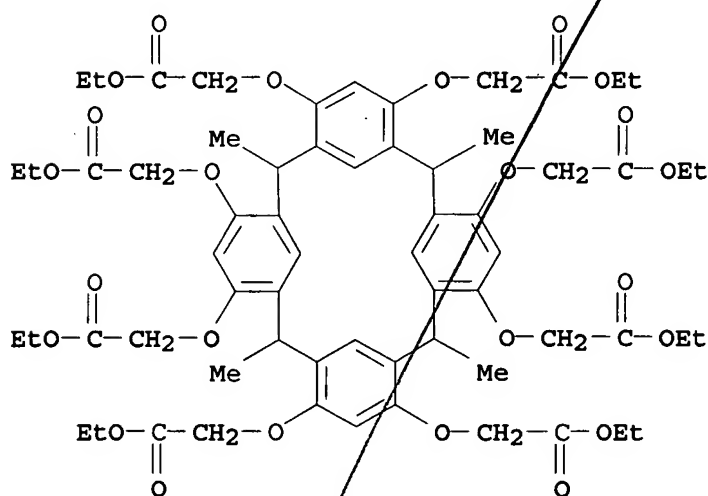
AB A convenient synthesis of methylene-bridged cyclic resorcinol oligomers (calix[4]resorcinarene) (I; R = H, CH₂CO₂Me; R₁ = H, Me) was reported. First, calix[4]resorcinarene octamethyl ether I (R = Me, R₁ = H) was prepared by the HCl-catalyzed condensation of 1,3-dimethoxybenzene with paraformaldehyde in ethylene glycol monoethyl ether. The MeO group was easily converted to OH group by treatment with BBr₃ in CHCl₃. In ¹H NMR spectra, each proton signal of these compds. is singlet. A novel ionophore based on calix[4]resorcinarene octaester I (R = CH₂CO₂Me, R₁ = H) was prepared. The ionophore showed higher affinity for larger alkali cations, K⁺, Rb⁺, and Cs⁺, than for smaller ones, Na⁺ and Li⁺. The ionophore based on C-methylated calix[4]resorcinarene I (R = CH₂CO₂Me, R₁ = Me) which was synthesized from resorcinol with acetaldehyde, on the contrary, did not bind alkali cations.

IT 171799-35-2P

(synthesis of methylene-bridged cyclic resorcinol oligomer)

RN 171799-35-2 HCAPLUS

CN Acetic acid, 2,2',2'',2''',2'''',2''''',2''''',2''''''-[[2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacos-
1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-
4,6,10,12,16,18,22,24-octayl]octakis(oxy)]octakis-,
1,1',1'',1''',1'''',1''''',1''''',1''''''-octaethyl ester (CA INDEX
NAME)

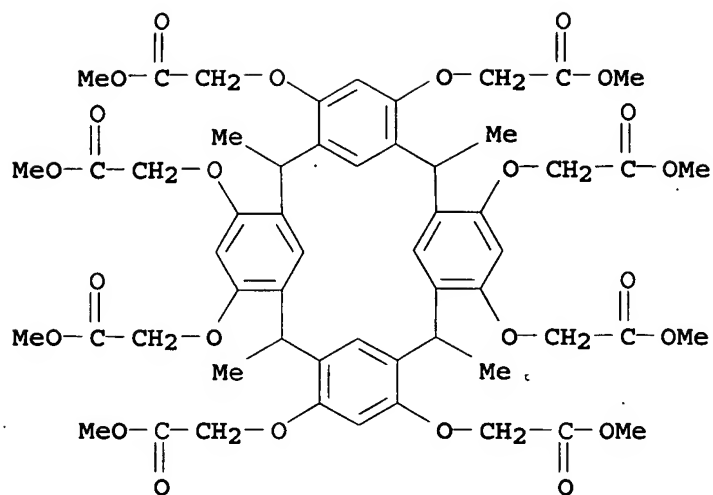


CC 25-29 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)

IT 171799-35-2P

(synthesis of methylene-bridged cyclic resorcinol oligomer)

CN Acetic acid, 2,2',2'',2''',2''''',2''''',2''''',2''''''-[(2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacos-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octayl)octakis(oxy)]octakis-, octamethyl ester (9CI) (CA INDEX NAME)



IT 294182-92-6P

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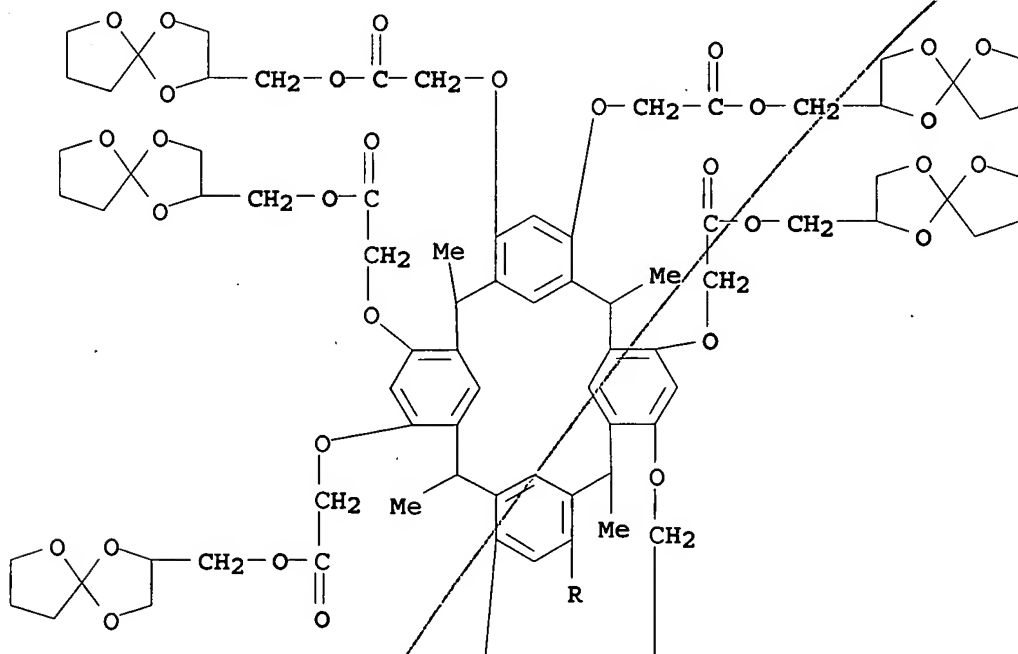
100  02  01
      (preparation and cationic photopolymer. of)

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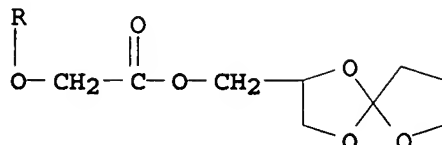
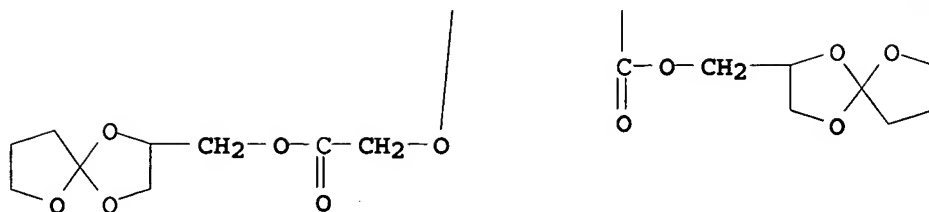
RN 294182-92-6 HCAPLUS

CN Acetic acid, 2,2',2'',2''',2'''',2''''',2''''',2''''''-[(2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacosal(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octayl)octakis(oxy)]octakis-, octakis(1,4,6-trioxaspiro[4.4]nonan-2-ylmethyl) ester (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A

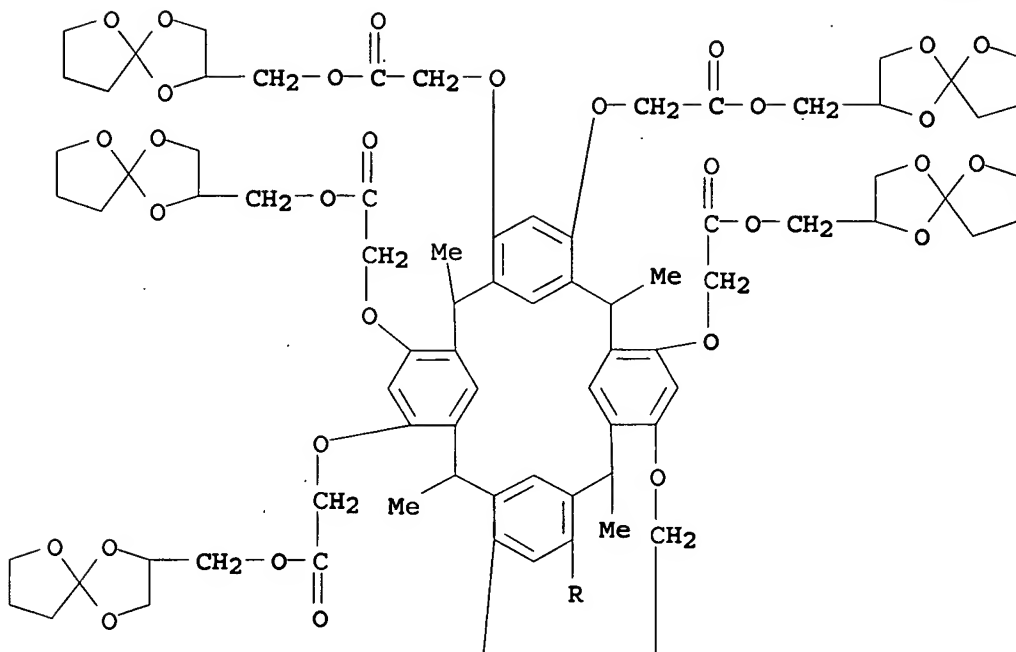


IT	294182-95-9P (preparation by photopolymer.)
RN	294182-95-9 HCAPLUS
CN	Acetic acid, 2,2',2'',2''',2''''',2''''',2''''',2''''''-[(2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacos-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octayl)octakis(oxy)]octakis-, octakis[1,4,6-trioxaspiro[4.4]non-2-ylmethyl) ester, homopolymer (9CI) (CA INDEX NAME)

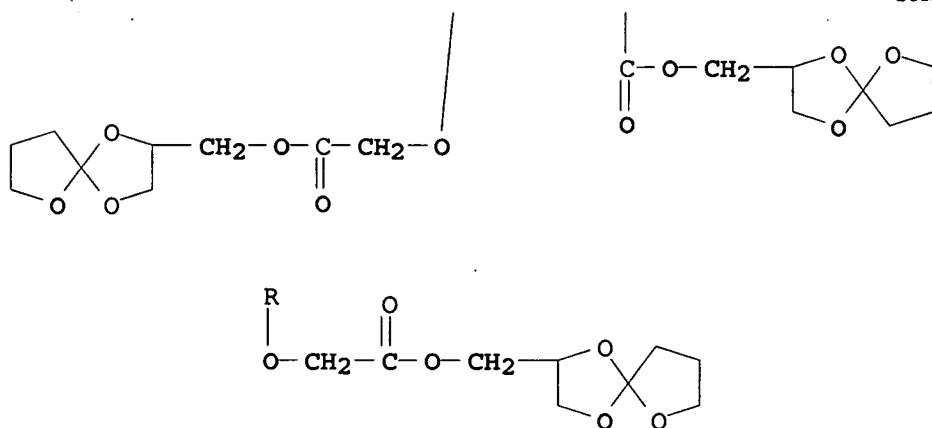
CM 1

CRN 294182-92-6
CMF C104 H128 O48

PAGE 1-A



PAGE 2-A



CC 35-7 (Chemistry of Synthetic High Polymers)
 IT 65338-98-9P 84298-07-7P 130508-38-2P 203063-80-3P
 508183-49-1P 508183-51-5P 508183-54-8P 508183-55-9P
 (in preparation of spiro ortho ester calixarene derivs.)
 IT 294182-92-6P 508183-57-1P 508183-59-3P
 (preparation and cationic photopolymer. of)
 IT 294182-95-9P 508217-77-4P 508217-78-5P
 (preparation by photopolymer.)

REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR
 THIS RECORD. ALL CITATIONS AVAILABLE IN THE
 RE FORMAT

L44 ANSWER 11 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2002:259517 HCAPLUS
DOCUMENT NUMBER: 137:20207
TITLE: Rigid Tetranitroresorcinarenes
AUTHOR(S): Shivanyuk, Alexander; Far, Adel Rafai; Rebek, Julius, Jr.
CORPORATE SOURCE: The Skaggs Institute for Chemical Biology and The Department of Chemistry, The Scripps Research Institute, La Jolla, CA, 92037, USA
SOURCE: Organic Letters (2002), 4(9), 1555-1558
CODEN: ORLEF7; ISSN: 1523-7060
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 137:20207
ED Entered STN: 09 Apr 2002
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

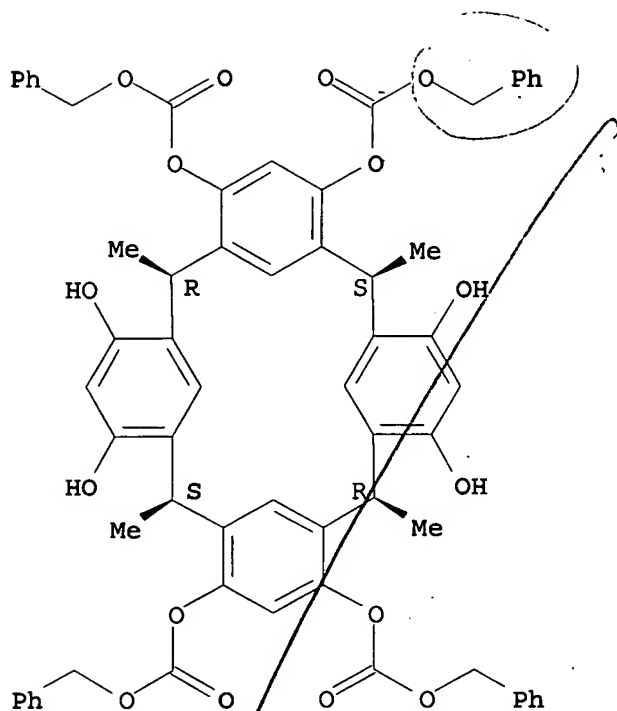
AB O-Alkylation of C2V-sym. resorcinarene tetraesters, e.g., I (X = CPh) with 2 equiv of 1,3-difluoro-4,6-dinitrobenzene readily affords conformationally rigid octanitro resorcinarene, e.g., II, which is a potential scaffold for the design of supramol. structures.

IT 213666-71-8
(preparation of rigid tetranitroresorcinarenes via O-alkylation of resorcinarene tetraesters with difluorodinitrobenzene)

RN 213666-71-8 HCAPLUS

CN Carbonic acid, (2R,8S,14R,20S)-10,12,22,24-tetrahydroxy-2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacos-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,16,18-tetrayl tetrakis(phenylmethyl) ester, rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



CC 25-29 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)
 IT 327-92-4, 1,3-Difluoro-4,6-dinitrobenzene 213666-71-8
 218436-19-2 351859-91-1 371773-18-1 434286-54-1 434286-55-2
 (preparation of rigid tetranitroresorcinarenes via O-alkylation of
 resorcinarene tetraesters with difluorodinitrobenzene)
 REFERENCE COUNT: 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR
 THIS RECORD. ALL CITATIONS AVAILABLE IN THE
 RE FORMAT

L44 ANSWER 12 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2001:891146 HCAPLUS

DOCUMENT NUMBER: 136:270357

TITLE: A positive-working alkaline developable
 photoresist based on partially
 tert-Boc-protected calix[4]resorcinarene and a
 photoacid generator

AUTHOR(S): Young-Gil, Kwon; Kim, Jin Baek; Fujigaya,

CORPORATE SOURCE: Tsuyohiko; Shibasaki, Yuji; Ueda, Mitsuru
 Department of Chemistry, Korea Advanced Institute
 of Science & Technology, Yusong-ku, Taejon,
 305-701, S. Korea

SOURCE: Journal of Materials Chemistry (2002),
 12(1), 53-57

CODEN: JMACEP; ISSN: 0959-9428

PUBLISHER: Royal Society of Chemistry

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 11 Dec 2001

AB A pos. working low-mol.-weight photoresist based on partially
 t-Boc protected tetra-C-methylcalix[4]resorcinarene (t-Boc C-4-R) and
 a photoacid generator (PAG), diphenyliodonium 9,10-dimethoxyanthracene-
 2-sulfonate (DIAS) was developed. t-Boc C-4-Rs were prepared by the
 reaction of C-4-R with di-CMe₃ dicarbonate in the presence of
 4-dimethylaminopyridine (DMAP). A clear film cast from a 20% t-Boc

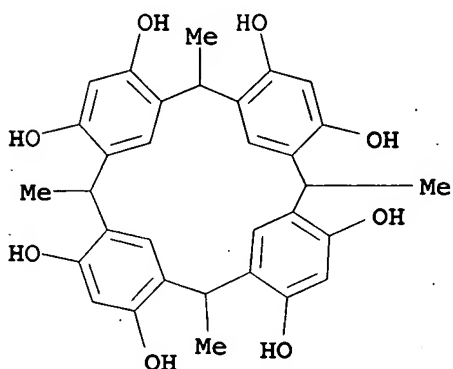
C-4-R solution in cyclohexanone showed high transparency to UV >300 nm. The appropriate t-Boc protecting ratio was .apprx.60 mol% in view of adhesion, deprotection temperature and dissoln. rate. The photoresist consisting of 60 mol% t-Boc C-4-R (95%) and DIAS (5%) showed a sensitivity of 13 mJ cm⁻² and a contrast of 12.6 when it was exposed to 365 nm light and post-baked at 105° for 90 s, followed by developing with a 2.38% aqueous Me₄NOH (TMAH) solution at room temperature. A fine pos. image featuring 1.5 μm of min. line and space patterns was observed on the film of the photoresist exposed to 40 mJ cm⁻² of UV-light at 365 nm by the contact mode.

IT 65338-98-9P 250715-31-2P

(pos.-working alkaline developable photoresist based on partially BOC-protected calix[4]resorcinarene and photoacid generator)

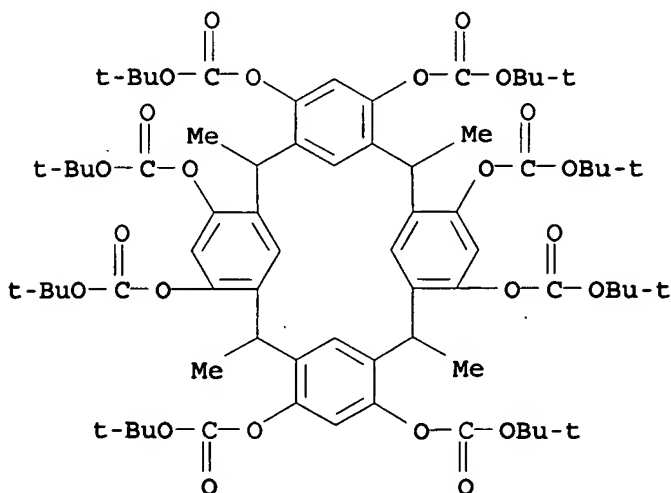
RN 65338-98-9 HCAPLUS

CN Pentacyclo[19.3.1.13,7.19,13.115,19]octacos-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octol, 2,8,14,20-tetramethyl- (CA INDEX NAME)



RN 250715-31-2 HCAPLUS

CN Carbonic acid, 2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacos-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octayl octakis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST pos working **photoresist** butoxycarbonyl protected calixarene photoacid generator

IT Dissolution
Positive **photoresists**
(pos.-working alkaline developable **photoresist** based on partially BOC-protected calix[4]resorcinarene and photoacid generator)

IT 75-07-0, Acetaldehyde, reactions 77-78-1 108-46-3, 1,3-Benzenediol, reactions 1122-58-3 1483-72-3 16106-40-4 34619-03-9 67580-39-6
(pos.-working alkaline developable **photoresist** based on partially BOC-protected calix[4]resorcinarene and photoacid generator)

IT 75-59-2P 65338-98-9P 250715-31-2P
(pos.-working alkaline developable **photoresist** based on partially BOC-protected calix[4]resorcinarene and **photoacid** generator)

IT 999-97-3
(silicon wafer coated with; pos.-working alkaline developable **photoresist** based on partially BOC-protected calix[4]resorcinarene and photoacid generator)

IT 405263-63-0
(silicon wafer coated with; pos.-working alkaline developable **photoresist** based on partially BOC-protected calix[4]resorcinarene and photoacid generator)

REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L44 ANSWER 13 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2001:348148 HCAPLUS

DOCUMENT NUMBER: 135-107762

TITLE: The influence of molecular architecture and solvent type on the size and structure of poly(benzyl ether) dendrimers by SANS

AUTHOR(S): Evmenenko, Guennady; Bauer, Barry J.; Kleppinger, Ralf; Forier, Bart; Dehaen, Wim; Amis, Eric J.; Mischenko, Nikolai; Reynaers, Harry

CORPORATE SOURCE: Laboratory of Macromolecular Structural Chemistry, Department of Chemistry, Catholic University of Leuven, Heverlee, B-3001, Belg.

SOURCE: Macromolecular Chemistry and Physics (2001), 202(6), 891-899
CODEN: MCHPES, ISSN: 1022-1352

PUBLISHER: Wiley-VCH Verlag GmbH

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 16 May 2001

AB The size of poly(benzyl ether) dendrimers with different mol. architectures was measured by small angle neutron scattering (SANS). Both polar and non-polar solvents were used to measure the effect of solvent type. The radius of gyration (R_g) of all of the dendrimers follows a scaling law of $R_g \propto M^{1/3}$ consistent with literature values of other chemical different dendrimers. The effect of solvent type on dendrimer size was minimal.

IT 350255-14-0
(influence of mol. architecture and solvent type on size and

structure of poly(benzyl ether) dendrimers by small angle neutron scattering)

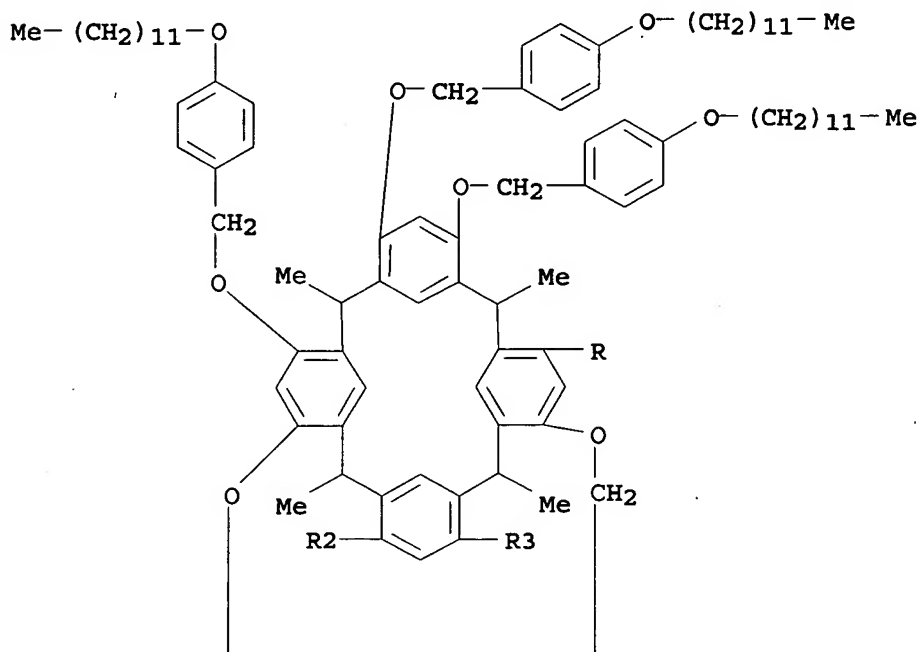
RN 350255-14-0 HCAPLUS

CN Pentacyclo[19.3.1.13,7.19,13.115,19]octacos-

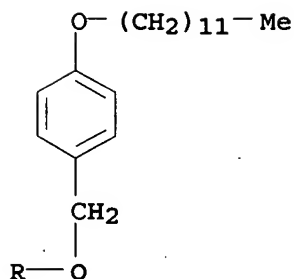
1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene,

4,6,10,12,16,18,22,24-octakis[[4-(dodecyloxy)phenyl]methoxy]-2,8,14,20-tetramethyl- (CA INDEX NAME)

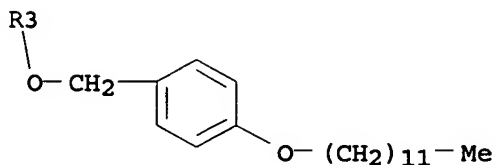
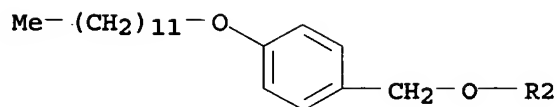
PAGE 1-A



PAGE 2-A



PAGE 3-A



CC 36-2 (Physical Properties of Synthetic High Polymers)

IT 350255-14-0 350255-15-1

(influence of mol. architecture and solvent type on size and structure of poly(benzyl ether) dendrimers by small angle neutron scattering)

REFERENCE COUNT:

42

THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L44 ANSWER 14 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2001:272887 HCAPLUS

DOCUMENT NUMBER: 135:61583

TITLE: Synthesis and photoinduced deprotection of calixarene derivatives containing certain protective groups

AUTHOR(S): Nishikubo, Tadatomi; Kameyama, Atsushi; Tsutsui,

CORPORATE SOURCE: Kousuke; Kishimoto, Shinichi
Department of Applied Chemistry, Faculty of
Engineering, Kanagawa University, Yokohama,
221-8686, Japan

SOURCE: Journal of Polymer Science, Part A: Polymer
Chemistry (2001), 39(9), 1481-1494
CODEN: JPACEC; ISSN: 0887-624X

PUBLISHER: John Wiley & Sons, Inc.

DOCUMENT TYPE: Journal

LANGUAGE: English

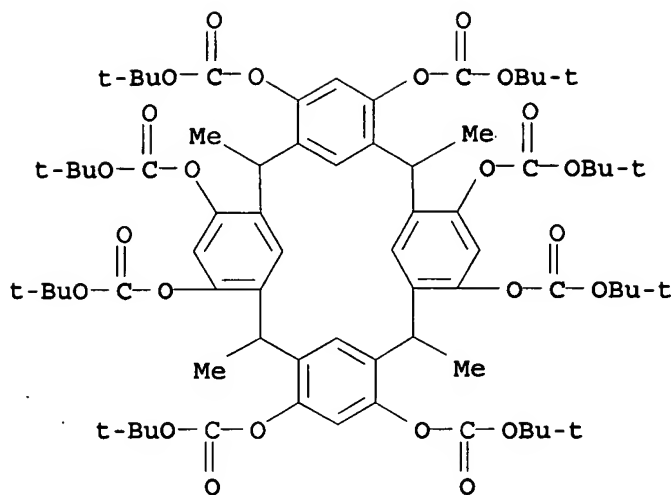
ED Entered STN: 18 Apr 2001

AB Calixarene derivs. 1, 2, and 3 containing pendant tert-butoxycarbonyl (t-BOC) groups were synthesized in 81, 93, and 83% yield, resp., by the reaction of C-methylcalix[4]resorcinarene (CRA), p-methylcalix[6]arene (MCA), and p-tert-butylcalix[8]arene (BCA) with di-tert-Bu dicarbonate using triethylamine as a base in pyridine. Calixarene derivs. containing pendant trimethylsilyl ether (TMSE) groups were obtained in 58, 50, and 82% yields, resp., by the reaction of CRA, MCA, and BCA with 1,1,1,3,3,3-hexamethyldisilazane using chlorotrimethylsilane as an accelerator in THF. Calixarene derivs. containing pendant cyclohexenyl ether (CHE) groups were also prepared in 65, 78, and 84% yields, resp., by the reaction of CRA, MCA, and BCA with 3-bromocyclohexene using KOH as base and tetrabutylammonium bromide as phase-transfer catalyst in N-methyl-2-pyrrolidone. The photoinduced deprotection of calixarene derivs. 1-3 was examined with bis-[4-(diphenylsulfonio)phenyl]sulfide bis(hexafluorophosphate) as a photoacid generator on UV irradiation followed by heating in the film state, and the deprotection of the t-BOC groups proceeded smoothly in high conversion. The deprotection rate of the t-BOC groups of 2 and 3 was much lower than that of 1 under the same irradiation conditions. The photoinduced deprotection of calixarenes containing tetramethylsilane groups and CHE groups was also examined under similar reaction conditions; the deprotection rate of the substituted compds. was lower than that of 1-3 calixarenes.

IT 250715-31-2P
(synthesis and photoinduced deprotection of calixarene derivs. containing t-BOC and trimethylsilyl ether cyclohexenyl ether protective groups)

RN 250715-31-2 HCAPLUS

CN Carbonic acid, 2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacos-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octayl octakis(1,1-dimethylethyl) ester (9CI)
(CA INDEX NAME)



CC 35-2 (Chemistry of Synthetic High Polymers)

IT 68971-83-5P 160399-38-2P 250715-26-5P 250715-27-6P
 250715-31-2P 250715-32-3P 250715-35-6P 250715-36-7P
 346406-91-5P

(synthesis and photoinduced deprotection of calixarene derivs.
 containing t-BOC and trimethylsilyl ether cyclohexenyl ether protective
 groups)

REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR
 THIS RECORD. ALL CITATIONS AVAILABLE IN THE
 RE FORMAT

L44 ANSWER 15 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2001:133371 HCAPLUS

DOCUMENT NUMBER: 134:318932

TITLE: New liquid crystals based on calixarenes

AUTHOR(S): Yonetake, Koichiro; Nakayama, Tomonari; Ueda,
 Mitsuru

CORPORATE SOURCE: Department of Materials Science and Engineering,
 Faculty of Engineering, Yamagata University,
 Yonezawa, Yamagata, 992-8510, Japan

SOURCE: Journal of Materials Chemistry (2001),
 11(3), 761-767

CODEN: JMACEP; ISSN: 0959-9428

PUBLISHER: Royal Society of Chemistry

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 23 Feb 2001

AB New liquid crystals based on calixarenes were prepared by the reaction of
 calixarene, tert-butylcalix[8]arene and C-methyloctakis(2-
 hydroxyethyl)calix[4]resorcinarene, and 11-[(4'-cyano-1,1'-biphenyl-4-
 yl)oxy]undecanoyl chloride in the presence of NEt₃. The structures of
 were characterized by IR, ¹H NMR, ¹³C NMR, and MALDI-TOF mass
 spectroscopies. The prepared compds. have glass transitions at
 .apprx.-30 and 25°, resp. Both of them exhibited smectic liquid
 crystals. One compound adopts a specific mol. structure due to the
 rigid bowl calix[4]resorcinarene core, i.e., a cone-like structure
 with mesogenic units aligned within the mol. Also, the smectic A
 phase was transformed to nematic. The supercooling of this compound for
 the phase transition was very small due to the mol. structure.

IT 335118-71-3P

[illegible]

L44 ANSWER 17 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2000:733217 HCAPLUS
DOCUMENT NUMBER: 133:310624
TITLE: Cyanoacrylate adhesive composition with good
surface and clearance curability
INVENTOR(S): Tajima, Seitaro; Sato, Mitsuyoshi

PATENT ASSIGNEE(S): Toa Gosei Chemical Industry Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 20 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000290601	A	20001017	JP 1999-100616	19990407
			<--	
JP 3613321	B2	20050126		
DE 10017246	A1	20001109	DE 2000-10017246	20000406
			<--	
FR 2791985	A1	20001013	FR 2000-4459	20000407
			<--	
FR 2791985	B1	20041217		
US 6547985	B1	20030415	US 2000-545609	20000407
			<--	
US 2003135016	A1	20030717	US 2003-375364	20030228
			<--	
US 6830704	B2	20041214		
PRIORITY APPLN. INFO.:			JP 1999-100616	A 19990407
			<--	
			US 2000-545609	A1 20000407
			<--	

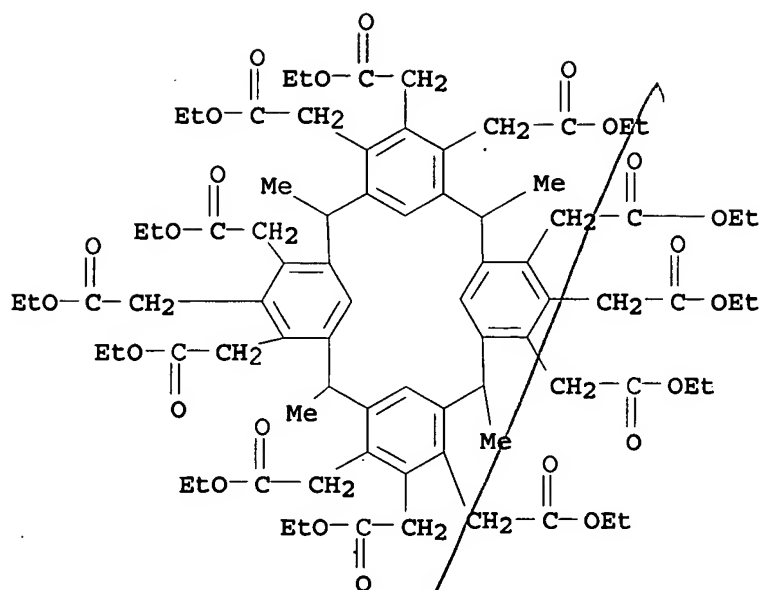
ED Entered STN: 17 Oct 2000

AB The composition contain (a) Lewis acid metal salts consisting of specified metal such as Zn, Cd, etc. and conjugate bases of O-containing acids, where the metals are bonded to the conjugate based via the O atom; and (b) inclusion compds. An adhesive contained Et 2-cyanoacrylate, Al acetate (10 ppm), and 18-crown-O-6 (500 ppm), showing set time 7 min.

IT 301830-24-0
 (cyanoacrylate adhesive composition with good surface and clearance curability)

RN 301830-24-0 HCAPLUS

CN Pentacyclo[19.3.1.13,7.19,13.115,19]octacos-
 1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-
 4,5,6,10,11,12,16,17,18,22,23,24-dodecaacetic acid,
 2,8,14,20-tetramethyl-, dodecaethyl ester (9CI) (CA INDEX NAME)



IC ICM C09J004-04
 ICS C09J011-06
 CC 38-3 (Plastics Fabrication and Uses)
 IT 139-12-8, Aluminum acetate 543-90-8, Cadmium acetate 555-32-8,
 Aluminum benzoate 7360-53-4, Aluminum formate 13257-51-7
 17455-13-9, 18-Crown-ether-6 23586-53-0 25322-68-3 36554-89-9,
 Aluminum trifluoroacetate 36554-90-2 36554-91-3 91812-77-0
 97600-39-0, 4-tert-Butyl calix[4]arene-O,O',O'',O'''-tetraacetic acid
 tetraethyl ester 226949-03-7 301830-24-0
 (cyanoacrylate adhesive composition with good surface and clearance
 curability)

L44 ANSWER 18 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2000:653730 HCAPLUS

DOCUMENT NUMBER: 133:238532

TITLE: Calixarene derivatives and low-mold-shrinkage
 curable resin compositions containing them
 INVENTOR(S): Nishikubo, Tadaomi; Kameyama, Atsushi; Ando,
 Yoshinori

PATENT ASSIGNEE(S): Kuraray Co., Ltd., Japan; Kanagawa University

SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000256362	A	20000919	JP 1999-61087	19990309

PRIORITY APPLN. INFO.: JP 1999-61087 19990309
 <--

OTHER SOURCE(S): MARPAT 133:238532

ED Entered STN: 19 Sep 2000

AB The title derivs. are calixarenes bearing spiro-orthoester groups.

Thus, mixing 0.34 g calix[4]resorcinarene with 1.96 g cesium carbonate in 3 mL N-methyl-2-pyrrolidone at room temperature for 5 h, adding 0.08 g tetrabutylammonium bromide and 1.15 g Me bromoacetate, mixing at 70° for 48 h and working up gave 2,8,14,20-tetramethyl-4,6,10,12,16,18,22,24-octakis[(methoxycarbonyl)methoxy]calix[4]resorcinarene which was hydrolyzed, heated with 1,8-diazabicyclo[5.4.0]-7-undecene in N-methyl-2-pyrrolidone at 60° for 12 h and derivatized with 2-bromomethyl-1,4,6-trioxaspiro[4.4]nonane to give a title derivative

IT 294182-92-6P

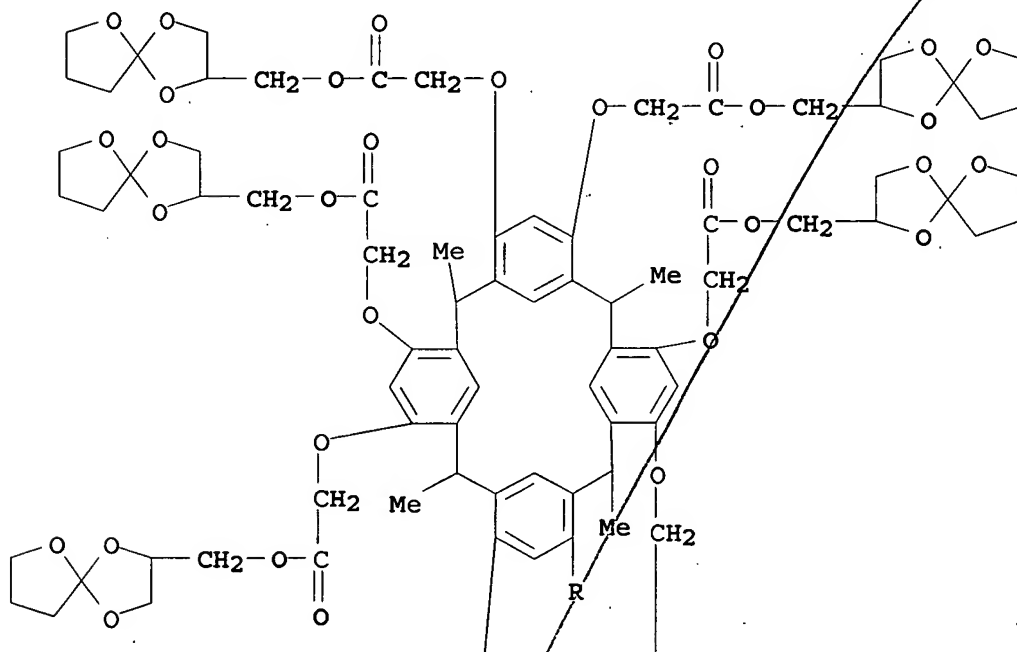
(calixarene derivs. and low-mold-shrinkage curable resin compns. containing them)

RN 294182-92-6 HCAPLUS

CN Acetic acid, 2,2',2'',2''',2'''',2''''',2''''',2''''''-[(2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacosal(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octayl)octakis(oxy)]octakis-, octakis(1,4,6-trioxaspiro[4.4]nonan-2-ylmethyl) ester (9CI) (CA INDEX NAME)

^

PAGE 1-A

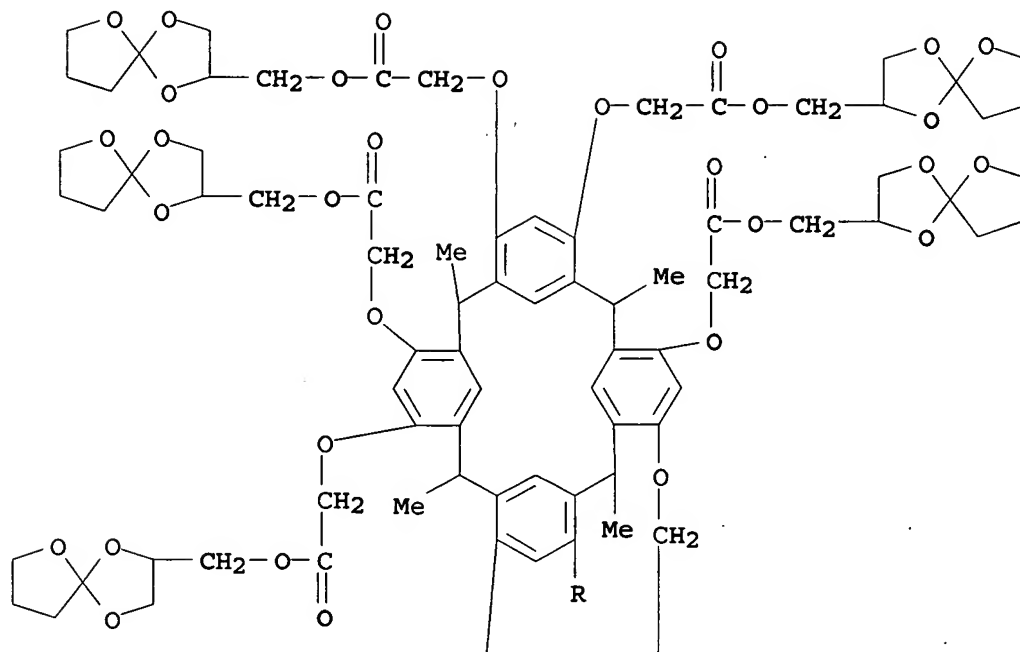


CM 1

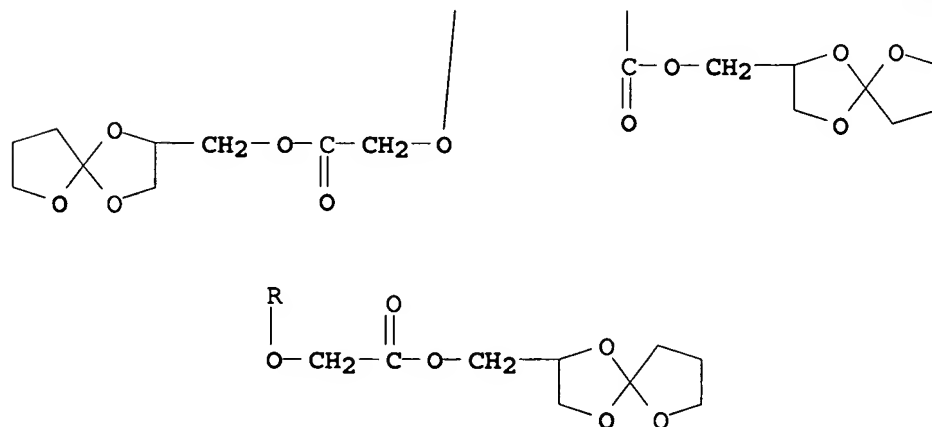
CRN 294182-92-6

CMF C104 H128 O48

PAGE 1-A



PAGE 2-A



IC ICM C07D493-10
 ICS C08G004-00; C08G008-36; C08G065-16; C08G085-00
 CC 35-7 (Chemistry of Synthetic High Polymers)
 IT 294182-92-6P 294182-93-7P 294182-94-8P
 (calixarene derivs. and low-mold-shrinkage curable resin compns.
 containing them)

IT 97600-42-5P 116851-59-3P 130508-38-2P 203063-80-3P
 294182-90-4P 294182-91-5P
 (intermediate; calixarene derivs. and low-mold-shrinkage curable resin compns. containing them)
 IT 294182-95-9P 294182-96-0P 294182-97-1P
 (photocurable resins; calixarene derivs. and low-mold-shrinkage curable resin compns. containing them)

L44 ANSWER 19 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2000:468070 HCAPLUS

DOCUMENT NUMBER: 133:90239

TITLE: Cyclic compounds useful as curing accelerators for 2-cyanoacrylates and 2-cyanoacrylate compositions therewith

INVENTOR(S): Tajima, Seitaro; Sato, Sanzen

PATENT ASSIGNEE(S): Mitsui Chemicals Inc., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

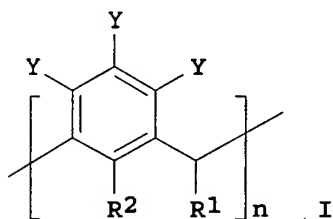
LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000191600	A	20000711	JP 1998-372151	19981228
			<--	
PRIORITY APPLN. INFO.:			JP 1998-372151	19981228
			<--	

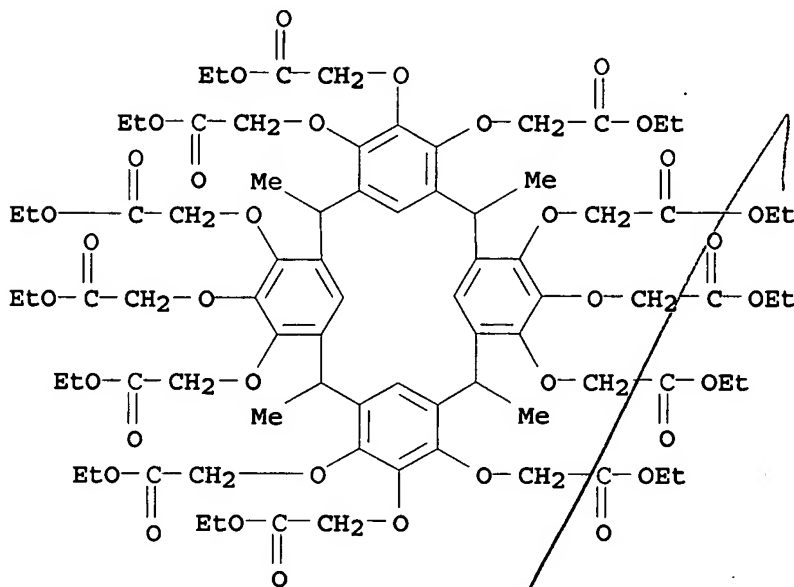
ED Entered STN: 12 Jul 2000
 GI



AB Title cyclic compns. are represented by the general formula I, where Y = H, OH, or OR (R does not initiate polymerization of 2-cyanoacrylates); at least one of Y = OR; at least one of remained Y = OH or OR; n = integer of ≥ 4 ; R1 = H or Me; and R2 = H or substituted group which does not initiate polymerization of 2-cyanoacrylates. Thus, an adhesive composition comprising Et 2-cyanoacrylate and 1% I (all Y = OCH₂COOCH₂CH₃, n = 4, R1 = Me, R2 = H) prepared from pyrogallol, 1,1-diethoxyethane, and Et bromoacetate was applied on methacrylic resin, chloroprene rubber, flexible PVC, SUS, or beech and cured at 25° for 18 h showing good instantaneous adhesion and giving a cured product without whitening.

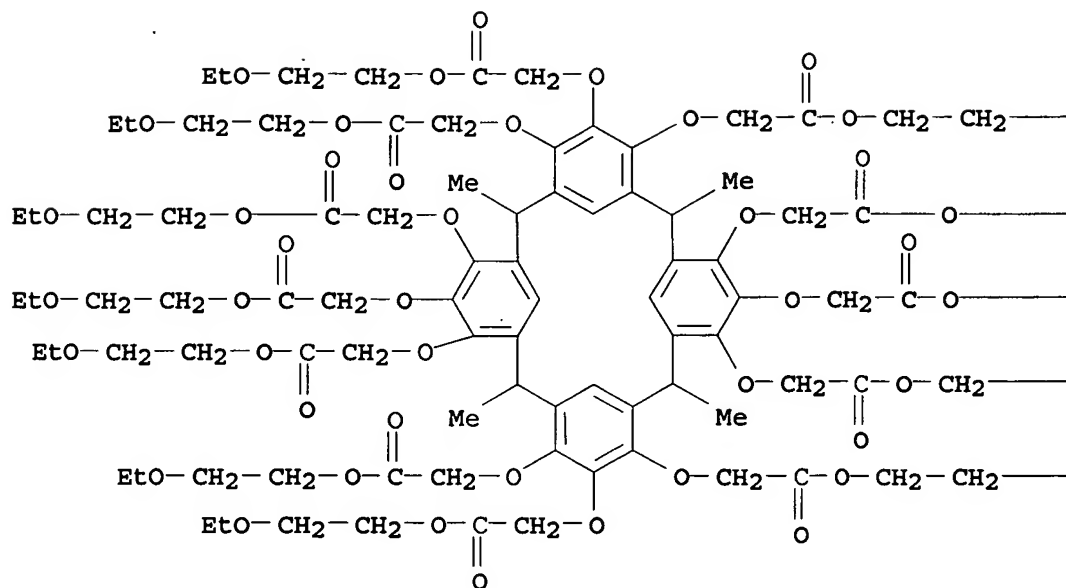
IT 280569-32-6P 280569-33-7P
 (preparation of cyclic compds. useful as curing accelerators for 2-cyanoacrylate polymer adhesives)

CN Acetic acid, 2,2',2'',2''',2'''',2''''',2''''',2''''',2''''',2''''',
 ''''',2''''',2''''',2'''''-[(2,8,14,20-
 tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacos-
 1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-
 4,5,6,10,11,12,16,17,18,22,23,24-dodecayl)dodecakis(oxy)]dodekakis-,
 dodecaethyl ester (9CI) (CA INDEX NAME)



CN Acetic acid, 2,2',2'',2'''',2''''',2''''',2''''',2''''',2''''',2''''',2''''',
 ''''',2''''',2'''''-[(2,8,14,20-
 tetramethylpentacyclo[9.3.1.13,7.19,13.115,19]octacos-
 1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-
 4,5,6,10,11,12,16,17,18,22,23,24-dodecayl)dodecakis(oxy)]dodecakis-,
 dodecakis(2-ethoxyethyl) ester (9CI) (CA INDEX NAME)

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PAGE 1-B

— OEt

— CH₂—CH₂—OEt— CH₂—CH₂—OEt— CH₂—OEt

— OEt

IC ICM C07C069-734

ICS C07C069-738; C08F004-00; C08F022-32; C09J004-04; C09J011-06;
C09J135-04

CC 37-6 (Plastics Manufacture and Processing)

Section cross-reference(s): 25, 38, 39, 67

IT 280569-32-6P 280569-33-7P 280569-34-8P

(preparation of cyclic compds. useful as curing accelerators for
2-cyanoacrylate polymer adhesives)

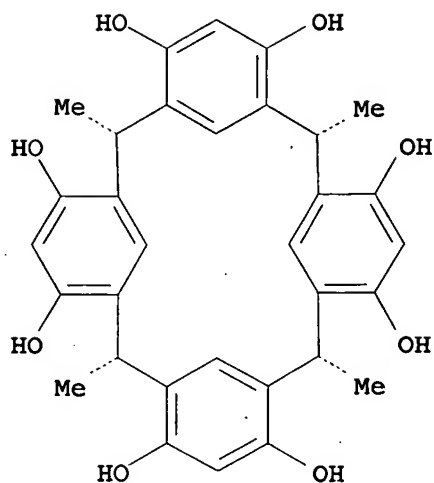
L44 ANSWER 20 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2000:354733 HCAPLUS

USHA SHRESTHA EIC 1700 REM 4B31

DOCUMENT NUMBER: 133:222285
TITLE: Multi-guest inclusion within one-dimensional hydrogen bonded polymers based on C-methylcalix[4]resorcinarene
AUTHOR(S): MacGillivray, Leonard R.; Holman, K. Travis; Atwood, Jerry L.
CORPORATE SOURCE: Department of Chemistry, University of Columbia-Missouri, Columbia, MO, 65211, USA
SOURCE: ACA Transactions (1999), Volume Date 1998, 33(Crystal Engineering), 129-133
CODEN: ATCRCS
PUBLISHER: American Crystallographic Association
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 28 May 2000
AB X-ray crystal structures (crystal data given) of co-crystals involving C-methylcalix[4]resorcinarene (I) and 4,4'-bipyridine crystallized from THF and THF/MeCN (8:1) are reported. In both cases, a one-dimensional (1D) wave-like H-bonded polymer, I.2(4,4'-bipyridine) (II), was formed in which 2 guests, II.2(THF) and II.THf.MeCN, which assemble as van der Waals type complexes, are located within an extended cavity of I. In the case of II.THf.MeCN, the mol. of MeCN interacts with I by way of C-H... π interactions. Such observations provide insight into those interactions which may occur in multi-guest host-guest systems.
IT 292046-41-4P 292046-43-6P
(crystallog. study of van der Waals complexes of THF and MeCN included in one-dimensional hydrogen bonded polymer of C-methylcalix[4]resorcinarene with 4,4'-bipyridine)
RN 292046-41-4 HCAPLUS
CN Pentacyclo[19.3.1.13,7.19,13.115,19]octacos-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octol, 2,8,14,20-tetramethyl-, stereoisomer, compd. with 4,4'-bipyridine and tetrahydrofuran (1:2:2) (9CI) (CA INDEX NAME)
CM 1
CRN 74708-10-4
CMF C32 H32 O8

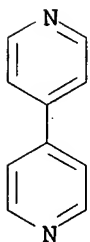
Relative stereochemistry.



CM 2

CRN 553-26-4

CMF C10 H8 N2



CM 3

CRN 109-99-9

CMF C4 H8 O



RN 292046-43-6 HCAPLUS

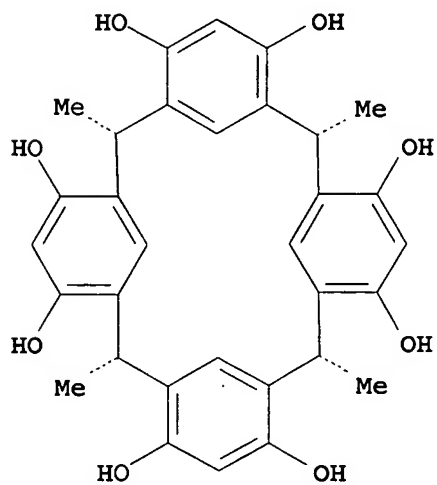
CN Pentacyclo[19.3.1.13,7.19,13.115,19]octacos-
 1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-
 4,6,10,12,16,18,22,24-octol, 2,8,14,20-tetramethyl-, stereoisomer,
 compd. with acetonitrile, 4,4'-bipyridine and tetrahydrofuran
 (1:1:2:1) (9CI) (CA INDEX NAME)

CM 1

CRN 74708-10-4

CMF C32 H32 O8

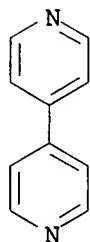
Relative stereochemistry.



CM 2

CRN 553-26-4

CMF C10 H8 N2



CM 3

CRN 109-99-9

CMF C4 H8 O



CM 4

CRN 75-05-8

CMF C2 H3 N

H₃C-C≡N

CC 22-12 (Physical Organic Chemistry)

Section cross-reference(s): 75

IT 292046-41-4P 292046-43-6P

(crystallog. study of van der Waals complexes of THF and MeCN
included in one-dimensional hydrogen bonded polymer of
C-methylcalix[4]resorcinarene with 4,4'-bipyridine)

REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR
THIS RECORD. ALL CITATIONS AVAILABLE IN THE
RE FORMAT

L44 ANSWER 21 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2000:48373 HCAPLUS

DOCUMENT NUMBER: 132:214979

TITLE: Solvent provides a trap for the guest-induced
formation of 1D host frameworks based upon
supramolecular, deep-cavity resorcin[4]arenes
AUTHOR(S): MacGillivray, Leonard R.; Reid, Jennifer L.;
Ripmeester, John A.
CORPORATE SOURCE: Steacie Institute for Molecular Sciences, National
Research Council of Canada, Ottawa, ON, K1A 0R6,
Can.
SOURCE: CrystEngComm (1999) No pp. Given,
Article 1
CODEN: CRECF4; ISSN: 1466-8033
URL: [http://www.rsc.org/ej/ce/1999/A907110E/index.
htm](http://www.rsc.org/ej/ce/1999/A907110E/index.htm)

PUBLISHER: Royal Society of Chemistry

DOCUMENT TYPE: Journal; (online computer file)

LANGUAGE: English

ED Entered STN: 21 Jan 2000

AB Co-crystallization of C-methylcalix[4]resorcinarene 1 with 4,4'-bipyridine 2
from EtOH in the presence of either an aromatic or a polycyclic guest
yields a wave-like host guest framework 3·guest {where 3 =
1·2(2), guest = p-chlorotoluene, adamantanone,
[2.2]paracyclophane} in which 3 forms by way of guest template
effects.

IT 260388-88-3

(crystallization and crystal structure of)

RN 260388-88-3 HCAPLUS

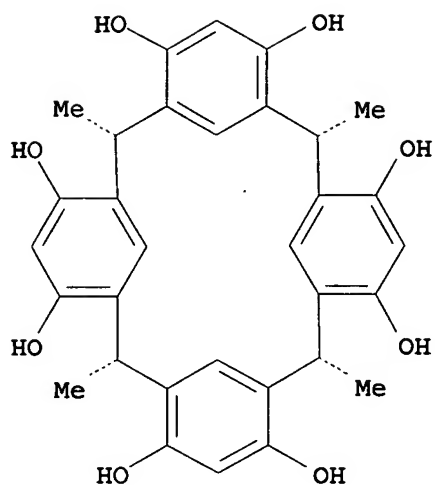
CN Pentacyclo[19.3.1.13,7.19,13.115,19]octacosa-
1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-
4,6,10,12,16,18,22,24-octol, 2,8,14,20-tetramethyl-, stereoisomer,
compd. with 4,4'-bipyridine and tricyclo[3.3.1.13,7]decanone (1:2:1)
(9CI) (CA INDEX NAME)

CM 1

CRN 74708-10-4

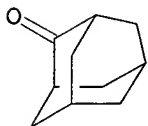
CMF C32 H32 O8

Relative stereochemistry.



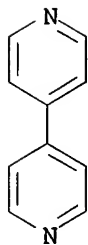
CM 2

CRN 700-58-3
CMF C10 H14 O



CM 3

CRN 553-26-4
CMF C10 H8 N2



CC 75-8 (Crystallography and Liquid Crystals)

Section cross-reference(s): 25, 28

IT 260388-87-2 260388-88-3 260388-89-4

(crystallization and crystal structure of)

REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR
THIS RECORD. ALL CITATIONS AVAILABLE IN THE
RE FORMAT

L44 ANSWER 22 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1999:744383 HCAPLUS

DOCUMENT NUMBER: 132:7560

TITLE: Acid-decomposable group-containing calixarenes, calixresorcinarenes, and photosensitive composition for resist

INVENTOR(S): Nishikubo, Tadaomi; Kameyama, Atsushi; Ota, Yoshihisa

PATENT ASSIGNEE(S): JSR Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 15 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11322656	A	19991124	JP 1998-146597	19980511

PRIORITY APPLN. INFO.:

JP 1998-146597 19980511

OTHER SOURCE(S): MARPAT 132:7560

ED Entered STN: 24 Nov 1999

GI For diagram(s), see printed CA Issue.

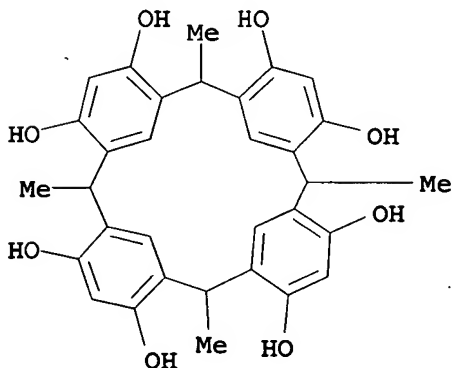
AB The composition contains ≥ 1 calix(resorcin)arenes I (R1, R2 = H, C1-5 alkyl; R3 = H, O2CBu-t, SiMe3, cyclohexenyl; n = 1-3; m = 4-12) and a photo-acid generator. The composition is useful as pos.-working chemical amplified resists.

IT 65338-98-9P, Calix[4]resorcinarene 160399-38-2P
250715-31-2P

(acid-decomposable group-containing calixarenes or calixresorcinarenes for photoresists)

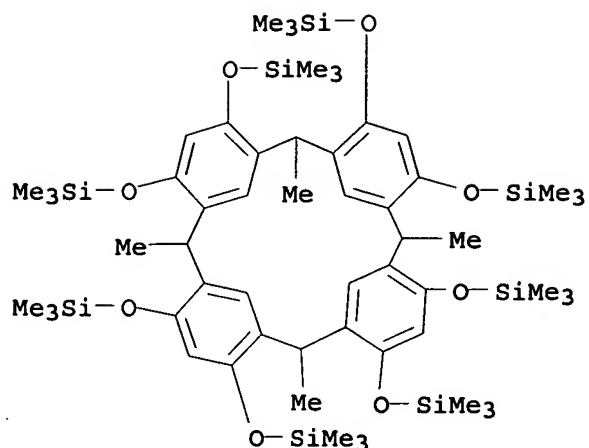
RN 65338-98-9 HCAPLUS

CN Pentacyclo[19.3.1.13,7.19,13.115,19]octacos-
1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-
4,6,10,12,16,18,22,24-octol, 2,8,14,20-tetramethyl- (CA INDEX NAME)



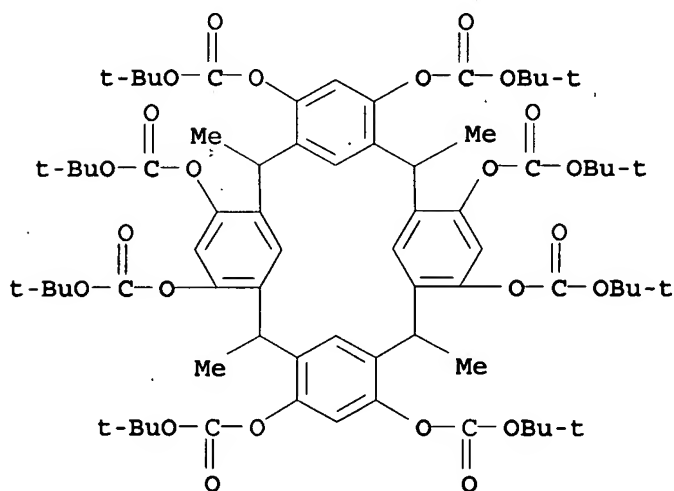
RN 160399-38-2 HCAPLUS

CN Silane, [(2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacos-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octayl)octakis(oxy)]octakis(trimethyl- (9CI)
(CA INDEX NAME)



RN 250715-31-2 HCAPLUS

CN Carbonic acid, 2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacos-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octayl octakis(1,1-dimethylethyl) ester (9CI)
(CA INDEX NAME)



IC ICM C07C043-235

ICS C07C069-33; C07F007-18; G03F007-039

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 25

ST calixarene calixresorcinarene photosensitive compn **resist**;
acid decomposable calixarene calixresorcinarene **photoresist**

IT Positive **photoresists**

(acid-decomposable group-containing calixarenes or calixresorcinarenes for **photoresists**)

IT Metacyclophanes

(calixarenes; acid-decomposable group-containing calixarenes or calixresorcinarenes for **photoresists**)

IT 108-46-3, 1,3-Benzenediol, reactions 123-63-7 1521-51-3,
3-Bromocyclohexene 68971-82-4, p-tert-Butylcalix(8)arene

250715-27-6 250715-28-7, p-Methylcalix(7)arene 250715-30-1,
p-Methylcalix(8)arene
(acid-decomposable group-containing calixarenes or calixresorcinarenes
for photoresists)

IT 65338-98-9P, Calix[4]resorcinarene 68971-83-5P
160399-38-2P 250715-26-5P 250715-31-2P
250715-32-3P 250715-33-4P 250715-34-5P 250715-35-6P
250715-36-7P 250715-37-8P 250715-39-0P 250715-40-3P
(acid-decomposable group-containing calixarenes or calixresorcinarenes
for photoresists)

L44 ANSWER 23 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1999:513131 HCAPLUS

DOCUMENT NUMBER: 131:293195

TITLE: Novel dissolution inhibitors based on calixarene
derivatives for use in chemical amplification
resists

AUTHOR(S): Ito, Hiroshi; Nakayama, Tomonari; Ueda, Mitsuru;
Sherwood, Mark; Miller, Dolores

CORPORATE SOURCE: IBM Almaden Research Center, San Jose, CA, 95120,
USA

SOURCE: Polymeric Materials Science and Engineering (
1999), 81, 51-52

CODEN: PMSE DG; ISSN: 0743-0515

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 18 Aug 1999

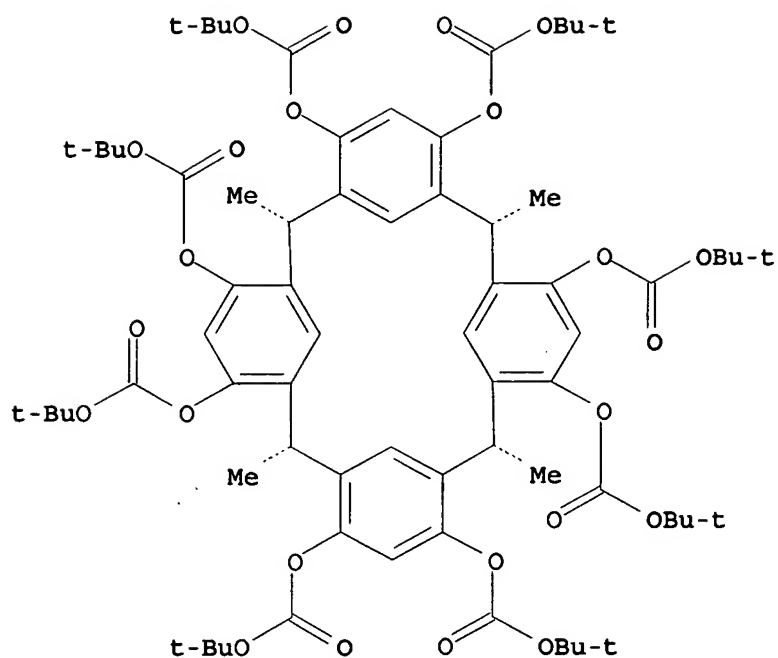
AB Calix[4]resorcinarenes were synthesized by condensing resorcinol with
aldehydes (acetaldehyde, benzaldehyde, and 4-isopropylbenzaldehyde)
and separated into C_{4v} and C_{2v}, isomers. All eight OH groups were
protected with acid-labile groups such as tBOC and tBuOCOCH₂. The
protected calixarenes have been found to be excellent dissoln.
inhibitors for use in chemical amplification resists.

IT 246023-01-8P 246023-03-0P
(novel dissoln. inhibitors based on calix[4]resorcinarenes for use
in chemical amplification resists)

RN 246023-01-8 HCAPLUS

CN Carbonic acid, 2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,1
9]octacos-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-
4,6,10,12,16,18,22,24-octayl octakis(1,1-dimethylethyl) ester,
stereoisomer (9CI) (CA INDEX NAME)

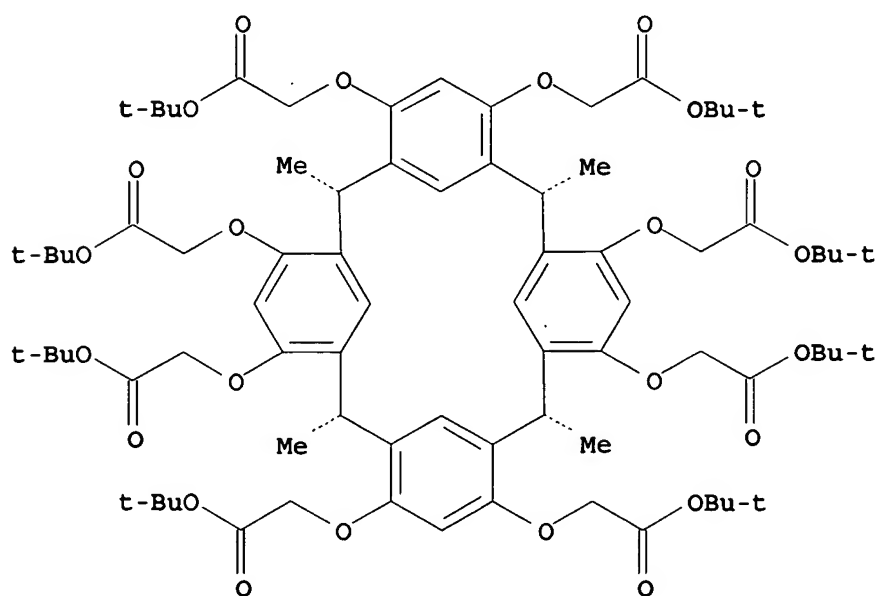
Relative stereochemistry.



RN 246023-03-0 HCAPLUS

CN Acetic acid, 2,2',2'',2''',2''''',2''''',2''''',2''''''-[(2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacosal(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octayl)octakis(oxy)octakis-, octakis(1,1-dimethylethyl) ester, stereoisomer (9CI) (CA INDEX NAME)

Relative stereochemistry.



CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38, 76
IT 74410-61-0DP, t-butoxycarbonyl- or t-butoxycabonylmethyl-protected
145843-14-7DP, t-butoxycarbonyl- or t-butoxycabonylmethyl-protected
246023-01-8P 246023-03-0P 246023-04-1DP,
t-butoxycarbonyl- or t-butoxycabonylmethyl-protected 246023-06-3P
246024-56-6DP, t-butoxycarbonyl- or t-butoxycabonylmethyl-protected
(novel dissoln. inhibitors based on calix[4]resorcinarenes for use
in chemical amplification resists)
REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR
THIS RECORD. ALL CITATIONS AVAILABLE IN THE
RE FORMAT

L44 ANSWER 24 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1999:44198 HCAPLUS

DOCUMENT NUMBER: 130:202814

TITLE: A New **Photoresist** Based on
Calix[4]resorcinarene Dendrimer

AUTHOR(S): Haba, Osamu; Haga, Kohji; Ueda, Mitsuru; Morikawa,
Osamu; Konishi, Hisatoshi

CORPORATE SOURCE: Department of Human Sensing and Functional Sensor
Engineering Graduate School of Engineering,
Yamagata University, Yamagata, 992-8510, Japan

SOURCE: Chemistry of Materials (1999), 11(2),
427-432

CODEN: CMATEX; ISSN: 0897-4756

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 22 Jan 1999

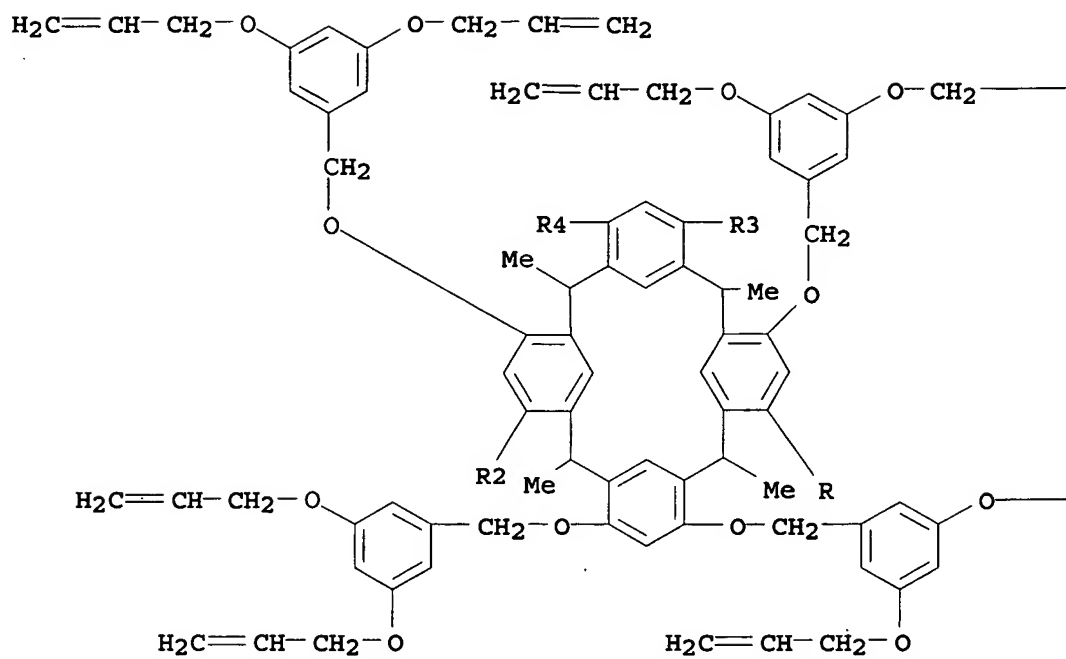
AB A new dendrimer (1), which contains phenol groups in the exterior for
solubilization in aqueous alkaline solution and calix[4]resorcinarene in the
interior to increase the mol. weight and number of the phenol group even in
the lower generation, was designed as new neg.-working,
alkaline-developable **photoresist** material. A neg.-working
photoresist based on 1, 2,6-bis(hydroxymethyl)phenol as
crosslinker, and diphenyliodonium 9,10-dimethoxyanthracene-2-sulfonate
as a photoacid generator was developed. This **resist** gave a
clear neg. pattern through postbaking at 110° after exposure to
UV light, followed by developing with a 0.3% aqueous Me4NOH solution at room
temperature

IT 196298-31-4P
(in synthesis of calix[4]resorcinarene dendrimer)

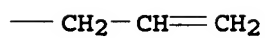
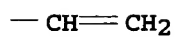
RN 196298-31-4 HCAPLUS

CN Pentacyclo[19.3.1.13,7.19,13.115,19]octacos-
1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene,
4,6,10,12,16,18,22,24-octakis[[3,5-bis(2-propenyloxy)phenyl]methoxy]-
2,8,14,20-tetramethyl- (9CI) (CA INDEX NAME)

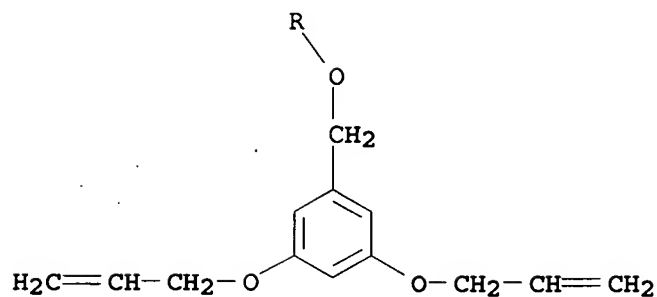
PAGE 1-A



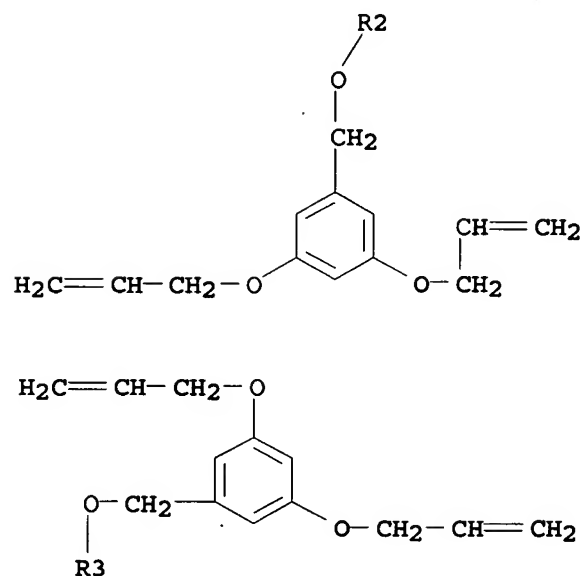
PAGE 1-B



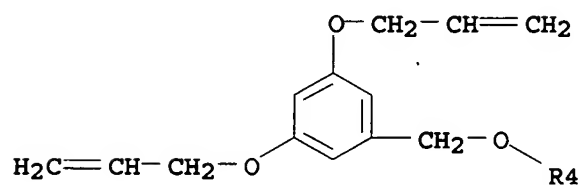
PAGE 2-A



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PAGE 4 - A



IT 196298-30-3P

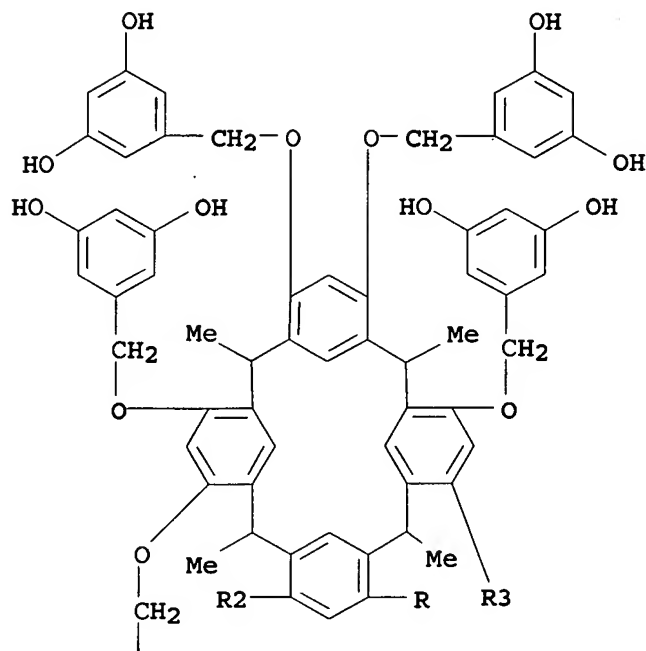
(lithog. characterization of new photoresist based on calix[4]resorcinarene dendrimer)

RN 196298-30-3 HCAPLUS

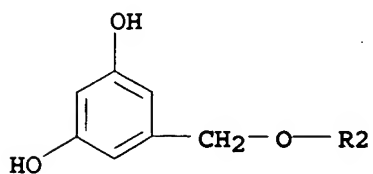
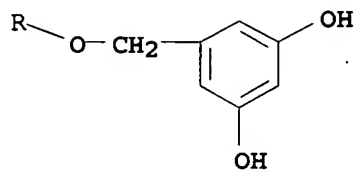
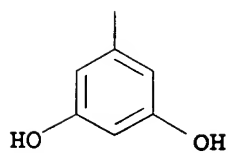
CN 1,3-Benzenediol, 5,5',5'',5''',5'''',5''''',5''''',5''''''-
[(2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacos-
1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-

4,6,10,12,16,18,22,24-octayl)octakis(oxymethylene)]octakis- (9CI) (CA
INDEX NAME)

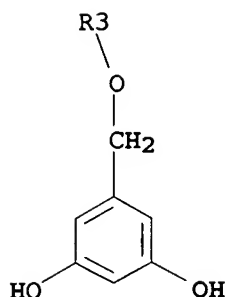
PAGE 1-A



PAGE 2-A



PAGE 3-A



- CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
- ST lithog photoresist calixresorcinarene dendrimer
- IT Negative photoresists
(lithog. characterization of new photoresist based on calix[4]resorcinarene dendrimer)
- IT Dendritic polymers
(lithog. characterization of new photoresist based on calix[4]resorcinarene dendrimer)
- IT 2937-59-9, 2,6-Bis(hydroxymethyl)phenol
(crosslinker; lithog. characterization of new photoresist based on calix[4]resorcinarene dendrimer)
- IT 75-59-2, Tetramethylammonium hydroxide
(developer; lithog. characterization of new photoresist based on calix[4]resorcinarene dendrimer)
- IT 135710-38-2P, Methyl 3,5-di(allyloxy)benzoate 177837-80-8P, 3,5-Di(allyloxy)benzyl alcohol 196298-31-4P
(in synthesis of calix[4]resorcinarene dendrimer)
- IT 196298-30-3P
(lithog. characterization of new photoresist based on calix[4]resorcinarene dendrimer)
- IT 137308-86-2, Diphenyliodonium 9,10-dimethoxyanthracene-2-sulfonate
(photoacid generator; lithog. characterization of new photoresist based on calix[4]resorcinarene dendrimer)
- REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L44 ANSWER 25 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1998:781642 HCAPLUS

DOCUMENT NUMBER: 130:146122

TITLE: A New Three-Component Photoresist Based on Calix[4]resorcinarene Derivative, a Crosslinker, and a Photoacid Generator

AUTHOR(S): Nakayama, Tomonari; Nomura, Masayoshi; Haga, Kohji; Ueda, Mitsuru

CORPORATE SOURCE: Dep. Human Sensing and Functional Sensor Eng., Graduate School of Eng., Yamagata University, Yonezawa, Yamagata, 992-8510, Japan

SOURCE: Bulletin of the Chemical Society of Japan (1998), 71(12), 2979-2984
CODEN: BCSJA8; ISSN: 0009-2673

PUBLISHER: Chemical Society of Japan

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 14 Dec 1998

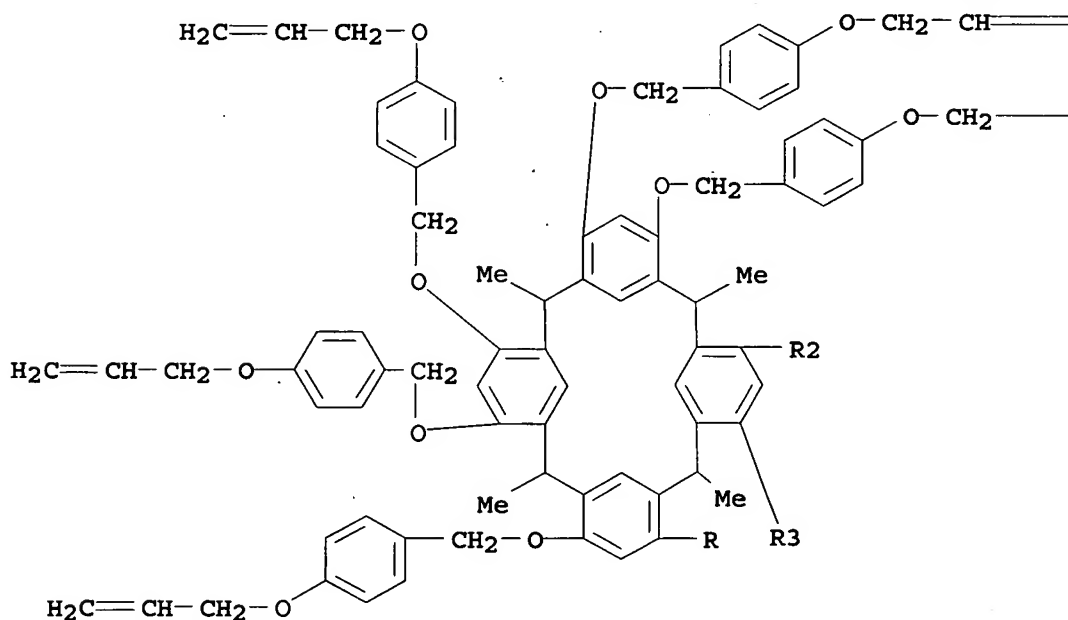
AB Calix[4]resorcinarene [2,8,14,20-tetramethylcalix[4]arene-4,6,10,12,16,18,22,24-octol; C4-RA] (4) having p-hydroxybenzyl groups on its exterior was prepared by the condensation of C4-RA and p-(allyloxy)benzyl bromide, followed by the cleavage of allyl groups with palladium catalyst and ammonium formate. Compound 4 having high transparency to UV-light above 300 nm was considered for a new resist matrix. A three-component photoresist consisting of 4, 2,6-bis(hydroxymethyl)-4-methylphenol (BHMP), and diphenyliodonium 9,10-dimethoxyanthracene-2-sulfonate (DIAS) showed a sensitivity of 19 mJ cm⁻²(D1/2) and a contrast of 3.0 (γ1/2) when it was exposed to 365 nm light and post-exposure baked (PEB) at 110 °C for 5 min, followed by developing with a 0.2 wt% aqueous tetramethylammonium hydroxide (TMAH) solution. A fine neg. image featuring 1 μm of min. line and space patterns was observed on film of the photoresist exposed to 40 mJ-cm⁻² of UV-light at 365 nm with a scanning electron microscope.

IT 220033-50-1P
(in synthesis of calix[4]resorcinarene derivative for photoresist formulation)

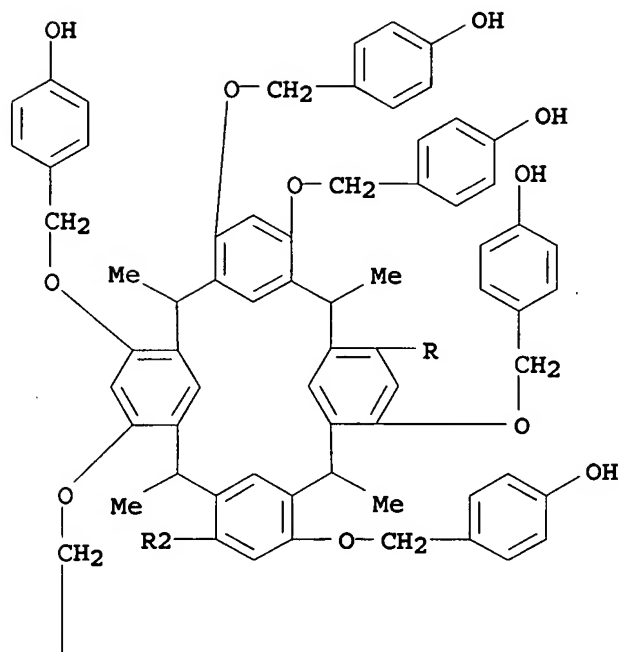
RN 220033-50-1 HCAPLUS

CN Pentacyclo[19.3.1.13,7.19,13.115,19]octacos-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene, 2,8,14,20-tetramethyl-4,6,10,12,16,18,22,24-octakis[[4-(2-propenyloxy)phenyl]methoxy]- (9CI) (CA INDEX NAME)

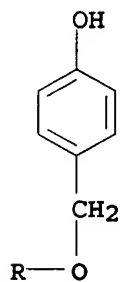
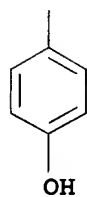
PAGE 1-A



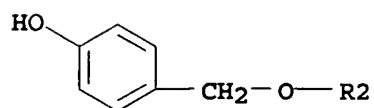
PAGE 1-A



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PAGE 3-A



CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST **photoresist** calixresorcinarene deriv crosslinker photoacid generator; lithog **photoresist** calixresorcinarene deriv

IT UV and visible spectra
(absorption; of calix[4]resorcinarene derivative for **photoresist** formulation)

IT **Photoresists**
(lithog. characteristics of three-component **photoresist** consisting of calix[4]resorcinarene derivative matrix and crosslinker and photoacid generator)

IT Thermal properties
(of calix[4]resorcinarene derivative for **photoresist** formulation)

IT 75-59-2, Tetramethylammonium hydroxide
(developer; lithog. characteristics of three-component **photoresist** consisting of calix[4]resorcinarene derivative matrix and crosslinker and photoacid generator)

IT 17455-13-9, 18-Crown-6
(in synthesis of calix[4]resorcinarene derivative for **photoresist** formulation)

IT 3256-45-9P, p-(Allyloxy)benzyl alcohol 143116-30-7P,
p-(Allyloxy)benzyl bromide 220033-50-1P
(in synthesis of calix[4]resorcinarene derivative for **photoresist** formulation)

IT 220033-49-8P
(lithog. characteristics of three-component **photoresist** consisting of calix[4]resorcinarene derivative matrix and crosslinker and **photoacid** generator)

IT 91-04-3, 2,6-Bis(hydroxymethyl)-4-methylphenol 137308-86-2;
Diphenyliodonium 9,10-dimethoxyanthracene-2-sulfonate
(lithog. characteristics of three-component **photoresist** consisting of calix[4]resorcinarene derivative matrix and crosslinker and photoacid generator)

IT 74708-10-4
(reaction with allyloxybenzyl bromide and 18-crown-6 in synthesis of calix[4]resorcinarene derivative for **photoresist** formulation)

REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L44 ANSWER 26 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1998:758628 HCAPLUS

DOCUMENT NUMBER: 130:73852

TITLE: Phenolic dendrimer and radiation-sensitive composition containing it for resist

INVENTOR(S): Ueda, Mitsuru

PATENT ASSIGNEE(S): JSR Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 25 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10310545	A	19981124	JP 1997-136066	19970509

PRIORITY APPLN. INFO.:

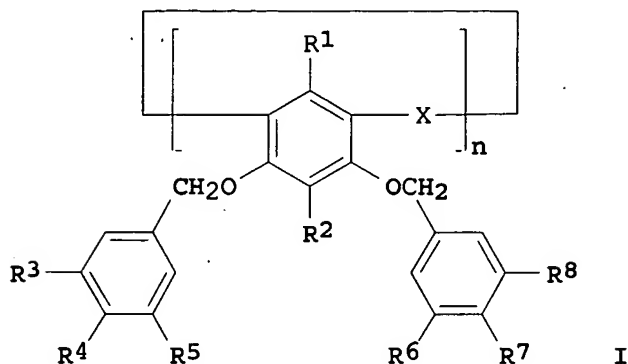
JP 1997-136066

19970509

OTHER SOURCE(S): MARPAT 130:73852

ED Entered STN: 03 Dec 1998

GI



AB Title composition contains phenolic dendrimer I (R1-R8 = H, OH, halo, alkyl, aryl, aralkyl, alkoxy, alkenyl, alkenyloxy, acyl, alkoxycarbonyl, alkyloxyloxy, aryloxyloxy, cyano, NO₂; ≥1 of R3-R8 = OH; X = single bond, CR₉R₁₀; R₉, R₁₀ = H, alkyl, aryl; n = 3-8). The composition is useful as resist showing high sensitivity and resolution

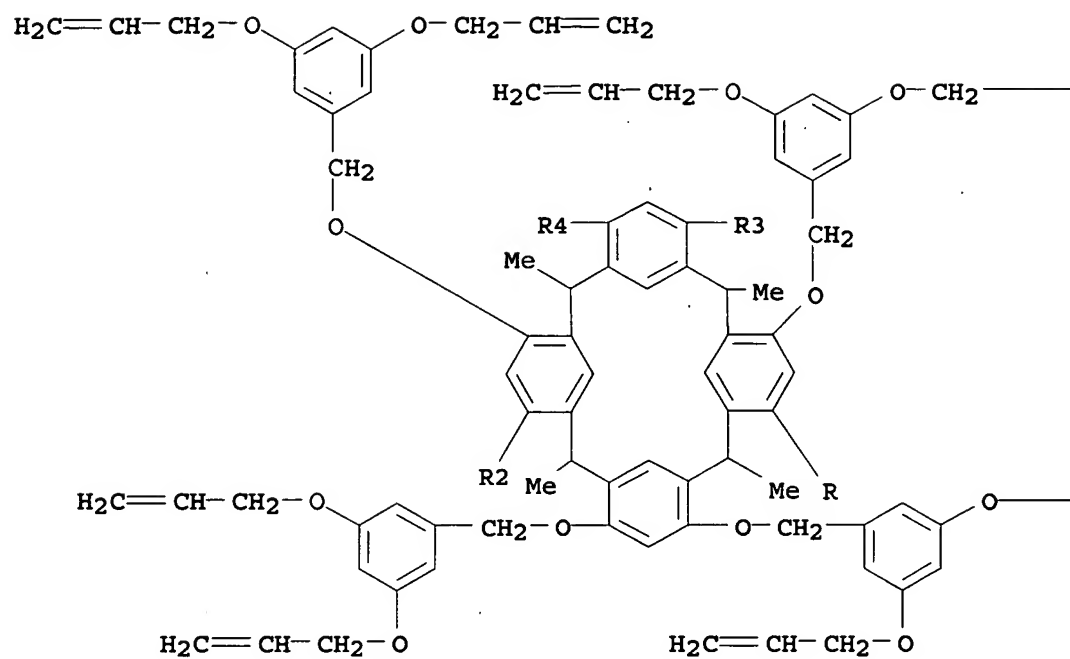
IT 196298-31-4P

(in preparation of phenolic dendrimer for radiation-sensitive resist composition)

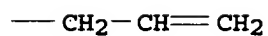
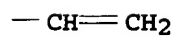
RN 196298-31-4 HCAPLUS

CN Pentacyclo[19.3.1.13,7.19,13.115,19]octacos-
1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene,
4,6,10,12,16,18,22,24-octakis[[3,5-bis(2-propenyloxy)phenyl]methoxy]-
2,8,14,20-tetramethyl- (9CI) (CA INDEX NAME)

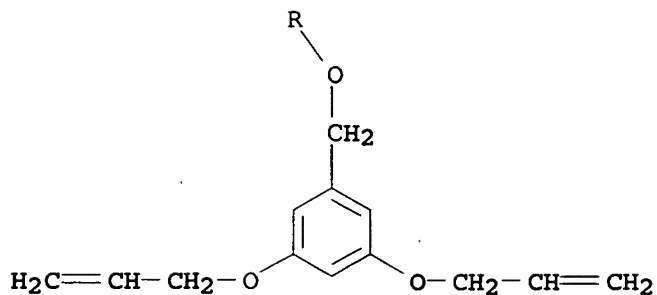
PAGE 1-A



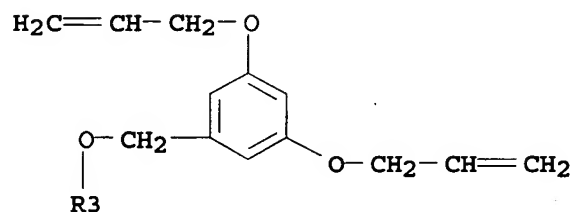
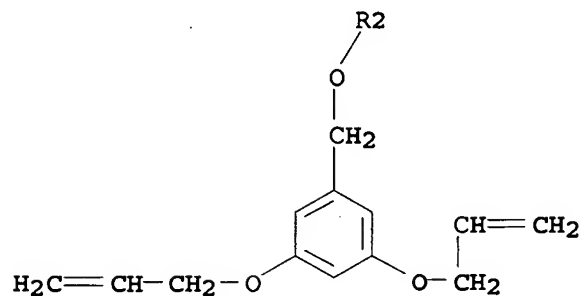
PAGE 1-B



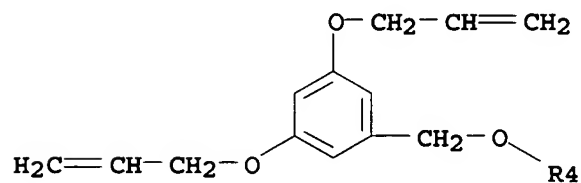
PAGE 2-A



PAGE 3-A



PAGE 4-A

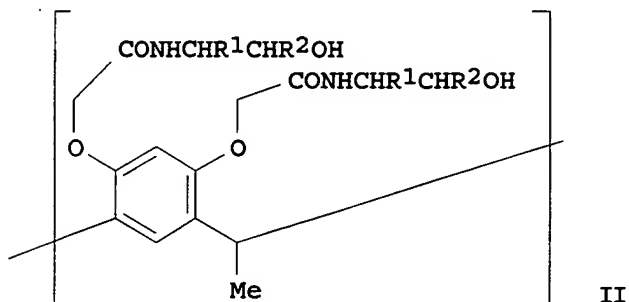
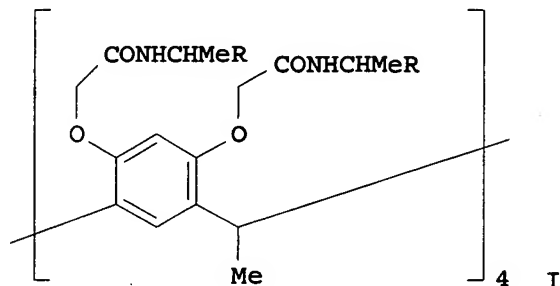


IC ICM C07C043-23
 ICS G03F007-022; G03F007-038; H01L021-027
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other
 Reprographic Processes)
 Section cross-reference(s): 25
 IT 2150-44-9P, Methyl 3,5-dihydroxybenzoate 65338-98-9P 135710-38-2P,
 Methyl 3,5-bis(allyloxy)benzoate 177837-80-8P 182058-69-1P

196298-31-4P

(in preparation of phenolic dendrimer for radiation-sensitive resist composition)

L44 ANSWER 27 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1998:733419 HCAPLUS
 DOCUMENT NUMBER: 130:95356
 TITLE: Chiral calixarenes derived from resorcinol. Part 3. Functionalization of octaester derivatives with chiral amines and amino alcohols
 AUTHOR(S): Iwanek, Waldemar
 CORPORATE SOURCE: Institute of Chemistry, Pedagogical University, Kielce, 25-020, Pol.
 SOURCE: Tetrahedron: Asymmetry (1998), 9(18), 3171-3174
 CODEN: TASYE3; ISSN: 0957-4166
 PUBLISHER: Elsevier Science Ltd.
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 ED Entered STN: 19 Nov 1998
 GI



AB A new type of chiral calixresorcarene is described. The formation of both enantiomers of I (R = Ph, cyclohexyl) and II (R₁ = Et, R₂ = H; R₁ = Me, R₂ = Ph) is controlled by the chiral amines and amino alcs. used for the reaction. Formation of the dimers of these compds. in the gas phase and in solution was observed using the LSIMS and ESI-MS methods. Formation of amide dimers of I (R = Ph) in chloroform was confirmed by fluorescence spectroscopy.

IT 171799-35-2P

(functionalization of calixresorcarene octaester with chiral amines

The chemical structure shows a macrocyclic compound consisting of four benzene rings connected by four methylene (-CH₂-) groups. Each benzene ring is substituted with a methyl group (-Me) and an ester side chain (-O-CH₂-C(=O)-OEt). The ester groups are positioned at the 1 and 3 positions relative to the methylene linkages on each benzene ring. The overall structure is symmetrical and forms a large ring.

REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

AB Neg.-working alkaline developable **photoresists** based on calix[4]-resorcinarene (1) or calixarene dendrimer (2), a crosslinker, and a photoacid generator have been developed. Compound 2 was prepared by the condensation of compound 1 with 3,5-diallyloxybenzylbromide,

followed by the removal of allyl groups. The resist consisting of 1 (70 wt%), a photoacid generator, diphenyliodonium 9,10-dimethoxyanthracene-2-sulfonate (DIAS) (10 wt%), and 4,4-methylenebis[2,6-bis(hydroxymethyl)-phenol] (MBHP) (20 wt%) as a crosslinker showed a sensitivity of 2.2 mJ-cm⁻² and a contrast of 3.1 when it was exposed to 365 nm light and postbaked at 130°C for 3 min, followed by developing with a 0.1% aqueous tetramethylammonium hydroxide (TMAH) solution. On the other hand, the resist formulated by mixing 2 (70 wt%), DIAS (10 wt%), and the crosslinker, 2,6-bis(hydroxymethyl)phenol (BHP) produced a clear neg. pattern by the exposure of 365 nm (10 mJ-cm⁻²) UV light, postbaked at 110°C for 3 min, and developed with a 0.3% TMAH aqueous solution

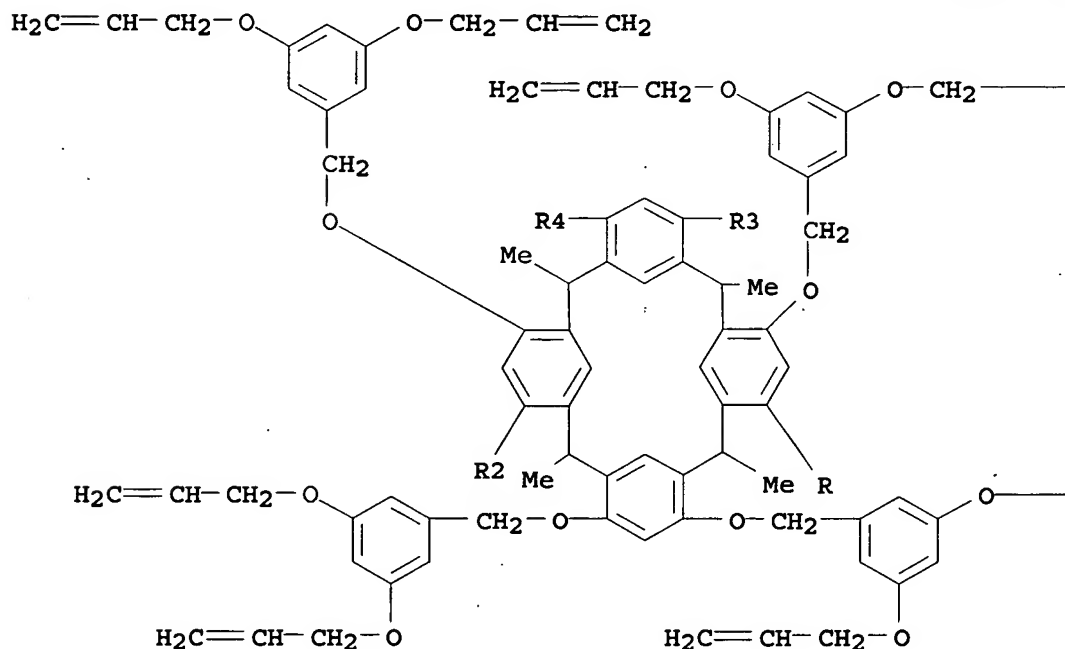
IT 196298-31-4P

(in synthesis of calix[4]-resorcinarene dendrimer for photoresist material)

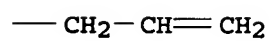
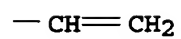
RN 196298-31-4 HCAPLUS

CN Pentacyclo[19.3.1.13,7.19,13.115,19]octacosal-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene, 4,6,10,12,16,18,22,24-octakis[3,5-bis(2-propenyloxy)phenyl]methoxy]-2,8,14,20-tetramethyl- (9CI) (CA INDEX NAME)

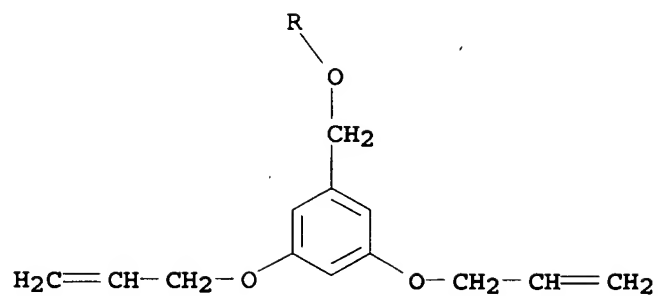
PAGE 1-A



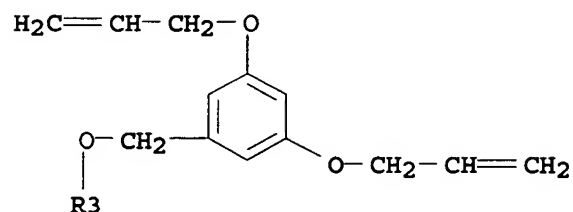
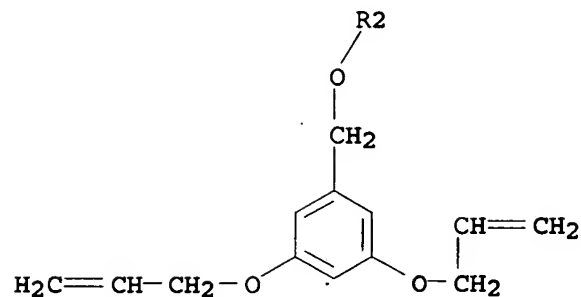
PAGE 1-B



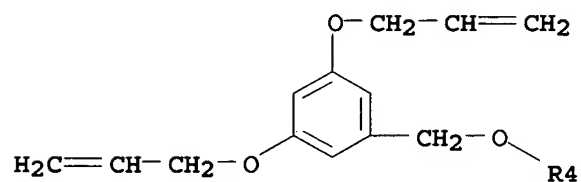
PAGE 2-A



PAGE 3-A



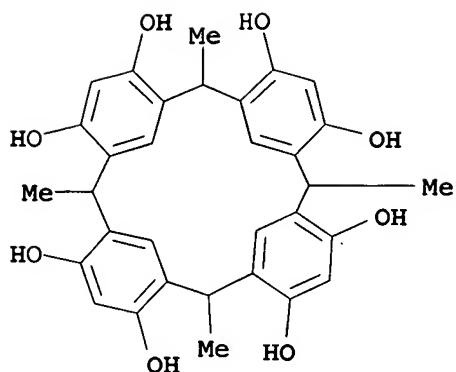
PAGE 4-A



IT 65338-98-9, Calix[4]resorcinarene
 (neg.-working alkaline developable photoresists based on
 calix[4]-resorcinarene and containing crosslinker and photoacid
 generator)

RN 65338-98-9 HCAPLUS

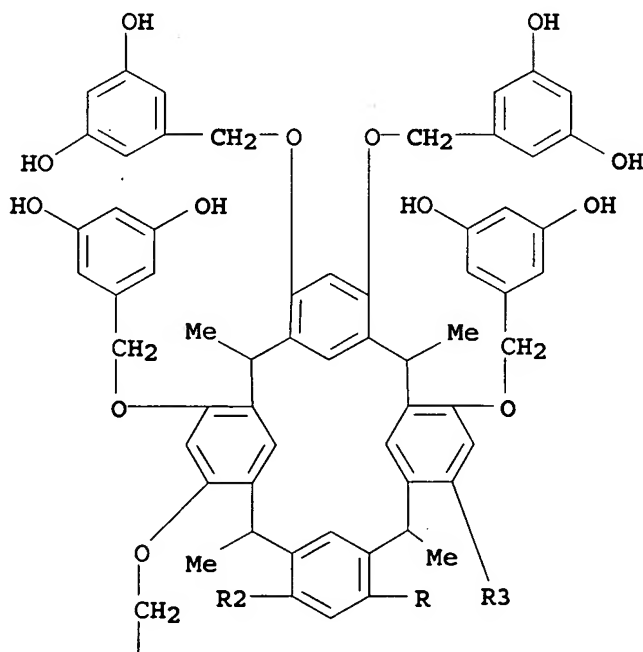
CN Pentacyclo[19.3.1.13,7.19,13.115,19]octacos-
 1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-
 4,6,10,12,16,18,22,24-octol, 2,8,14,20-tetramethyl- (CA INDEX NAME)



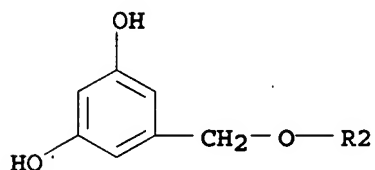
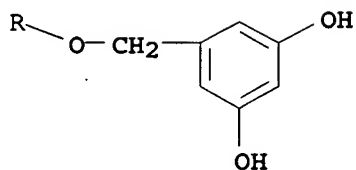
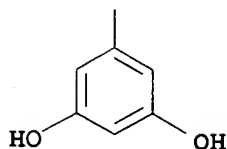
(neg.-working alkaline developable **photoresists** based on calix[4]-resorcinarene dendrimer and containing crosslinker and **photoacid** generator)

CN 1,3-Benzenediol, 5,5',5'',5''',5'''',5''''',5''''',5''''''-
[(2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacos-
1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-
4,6,10,12,16,18,22,24-octayl)octakis(oxymethylene)]octakis-. (9CI) (CA
INDEX NAME)

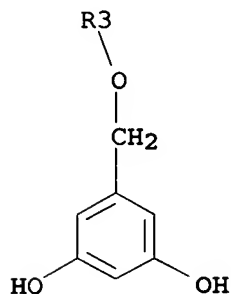
PAGE 1-A



PAGE 2-A



PAGE 3-A

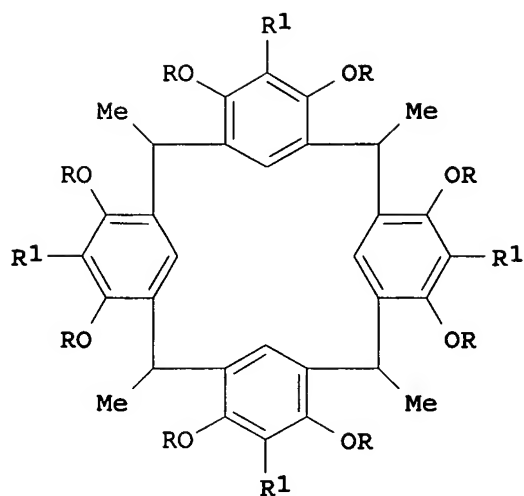


- CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
- ST **photoresist** calixarene dendrimer crosslinker photoacid generator
- IT Crosslinking
(neg.-working alkaline developable **photoresists** based on calix[4]-resorcinarene and containing crosslinker and photoacid generator)
- IT Dendritic polymers
Oligomers
(neg.-working alkaline developable **photoresists** based on calix[4]-resorcinarene dendrimer and containing crosslinker and photoacid generator)
- IT 2937-59-9, 2,6-Bis(hydroxymethyl)phenol 13653-12-8, 4,4'-Methylenebis[2,6-bis(hydroxymethyl)-phenol]
(crosslinker; neg.-working alkaline developable **photoresists** based on calix[4]-resorcinarene dendrimer and containing crosslinker

- and photoacid generator)
- IT 75-59-2, Tetramethylammonium hydroxide
(developer; neg.-working alkaline developable **photoresists**
based on calix[4]-resorcinarene dendrimer and containing crosslinker
and photoacid generator)
- IT 13965-03-2, Bis(triphenylphosphine)palladium dichloride
(in synthesis of calix[4]-resorcinarene dendrimer for
photoresist material)
- IT 196298-31-4P
(in synthesis of calix[4]-resorcinarene dendrimer for
photoresist material)
- IT 135710-38-2P 177837-80-8P 182058-69-1P
(in synthesis of calix[4]-resorcinarene dendrimer for
photoresist material)
- IT 65338-98-9, Calix[4]resorcinarene
(neg.-working alkaline developable **photoresists** based on
calix[4]-resorcinarene and containing crosslinker and **photoacid**
generator)
- IT 196298-30-3P
(neg.-working alkaline developable **photoresists** based on
calix[4]-resorcinarene dendrimer and containing crosslinker and
photoacid generator)
- IT 137308-86-2, Diphenyliodonium 9,10-dimethoxyanthracene-2-sulfonate
(photoacid generator; neg.-working alkaline developable
photoresists based on calix[4]-resorcinarene and containing
crosslinker and photoacid generator)
- IT 2150-44-9, Methyl 3,5-dihydroxybenzoate
(reaction with bromopropene in synthesis of calix[4]-resorcinarene
dendrimer for **photoresist** material)

REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR
THIS RECORD. ALL CITATIONS AVAILABLE IN THE
RE FORMAT

L44 ANSWER 29 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1998:576949 HCAPLUS
DOCUMENT NUMBER: 129:316027
TITLE: A new synthesis of tetrakis(C-
methyl)octakis(hydroxyethyl)calix[4]resorcinarene
via an ethoxy-tethered trimethylsiloxy precursor
AUTHOR(S): Neda, Ion; Siedentop, Tjark; Vollbrecht,
Alexander; Thoennessen, Holger; Jones, Peter G.;
Schmutzler, Reinhard
CORPORATE SOURCE: Institut Anorganische Analytische Chemie,
Technische Universitaet Braunschweig,
Braunschweig, D-38023, Germany
SOURCE: Zeitschrift fuer Naturforschung, B: Chemical
Sciences (1998), 53(8), 841-848
CODEN: ZNBSEN; ISSN: 0932-0776
PUBLISHER: Verlag der Zeitschrift fuer Naturforschung
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 129:316027
ED Entered STN: 10 Sep 1998
GI



I

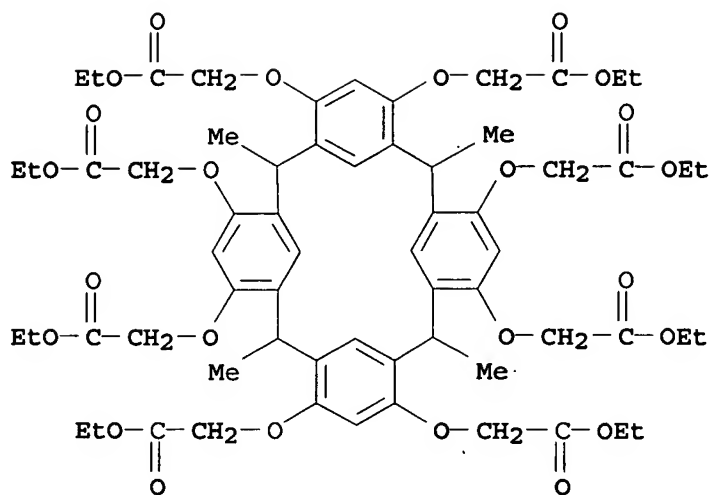
AB The octakis(trimethylsiloxy)calix[4]resorcinarenes, I (R = Me₃Si; R₁ = H, Br), were synthesized by reaction of the corresponding alcs. I (R = H; R₁ = H, Br) with (Me₃Si)₂NH, and were found to exhibit dynamic behavior in solution. Temperature-dependent NMR investigations confirmed the presence of at least 2 conformational isomers of I (R = Me₃Si, R₁ = H) in solution. The conformation of I (R = Me₃Si, R₁ = H) in the solid state was determined by an x-ray crystal structure anal. The calixarene displays a boat conformation. The introduction of the ethoxy group as a spacer was effected via reaction of I (R, R₁ = H) with BrCH₂CO₂Et and subsequent reduction with LiAlH₄ forming the ethoxy-tethered C-methylcalix[4]resorcinarene I [R = (CH₂)₂OH, R₁ = H] in an impure state. Reaction of crude I [R = (CH₂)₂OH, R₁ = H] with (Me₃Si)₂NH furnished the ethoxy-tethered octakis(trimethylsiloxy)calix[4]resorcinarene I [R = (CH₂)₂OSiMe₃, R₁ = H]. Subsequent hydrolysis led to pure I [R = (CH₂)₂OH, R₁ = H].

IT 171799-35-2P

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(preparation and conformational anal. of octakis(hydroxyethyl)calix[4]resorcinarene)
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RN 171799-35-2 HCAPLUS

CN Acetic acid, 2,2',2'',2''',2'''',2''''',2''''',2''''''-[[2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacosal(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octayl]octakis(oxy)]octakis-,
1,1',1'',1''',1'''',1''''',1''''',1''''''-octaethyl ester (CA INDEX NAME)



CC 25-29 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)

Section cross-reference(s): 22, 75

IT 65378-51-0P 171799-35-2P 214678-08-7P

(preparation and conformational anal. of octakis(hydroxyethyl)calix[4]resorcinarene)

L44 ANSWER 30 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1998:561964 HCAPLUS

DOCUMENT NUMBER: 129:260215

TITLE: Selective Derivatizations of Resorcinarenes. 4.
General Methods for the Synthesis of
C_{2v}-Symmetrical Derivatives

AUTHOR(S): Shivanyuk, Alexander; Paulus, Erich F.; Boehmer,
Volker; Vogt, Walter

CORPORATE SOURCE: Institut fuer Organische Chemie, Johannes
Gutenberg-Universitaet, Mainz, D-55099, Germany

SOURCE: Journal of Organic Chemistry (1998),
63(19), 6448-6449

CODEN: JOCEAH; ISSN: 0022-3263

PUBLISHER: American Chemical Society

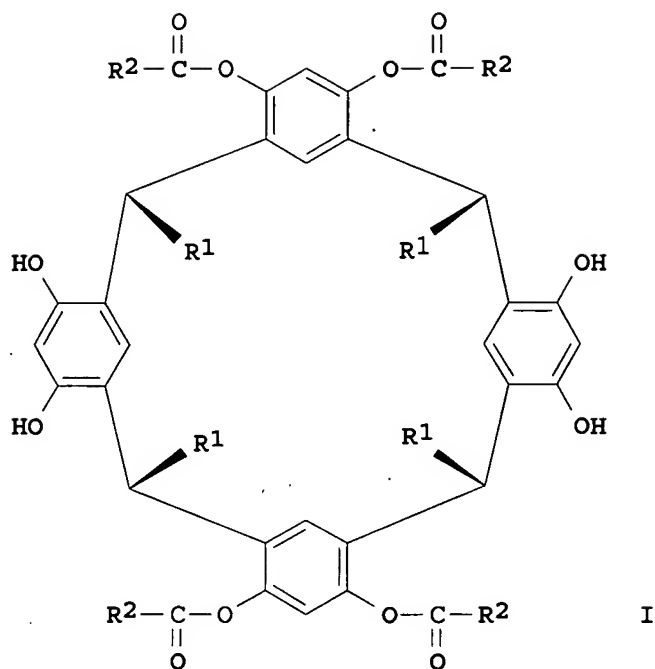
DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 129:260215

ED Entered STN: 04 Sep 1998

GI



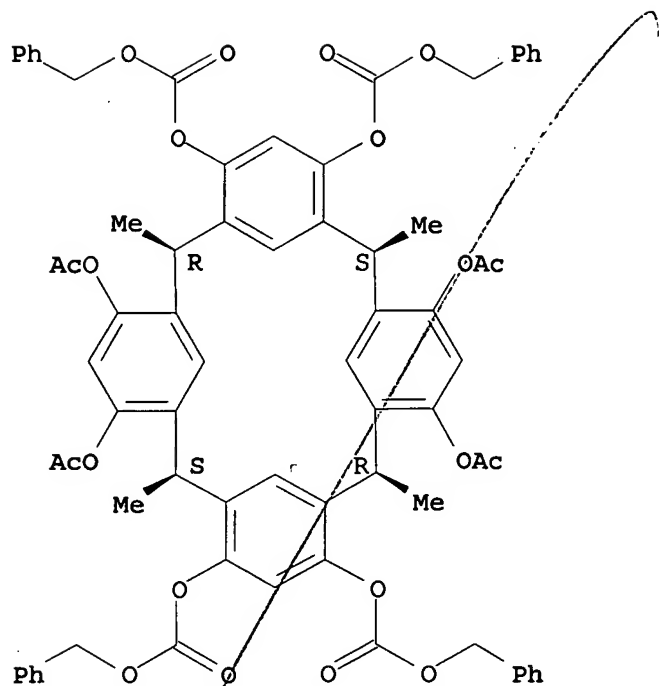
AB Regioselective tetraacylation of resorcarenes was achieved with aroyl and heteroaryl chlorides or benzyl chloroformate in MeCN in the presence of Et₃N. The tetraesters I (R₁ = Me, pentyl, PhCH₂CH₂, R₂ = aroyl, heteroaroyl, or PhCH₂O) obtained in gram quantities are promising intermediates for the preparation of C_{2v}-sym. tetraethers, aliphatic tetraesters, and resorcarenes derivs. selectively substituted in the 2-positions of opposite resorcinol rings. The single-crystal x-ray structures of I.5DMSO (R₁ = Me, R₂ = 4-MeC₆H₄) and I.3MeCN.H₂O (R₁ = pentyl, R₂ = 4-MeC₆H₄) are described.

IT 213666-81-0P 213666-82-1P 213666-83-2P
(preparation and catalytic hydrogenation of)

RN 213666-81-0 HCAPLUS

CN Carbonic acid, (2R,8S,14R,20S)-10,12,22,24-tetrakis(acetyloxy)-2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacos-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,16,18-tetrayl tetrakis(phenylmethyl) ester, rel- (9CI) (CA INDEX NAME)

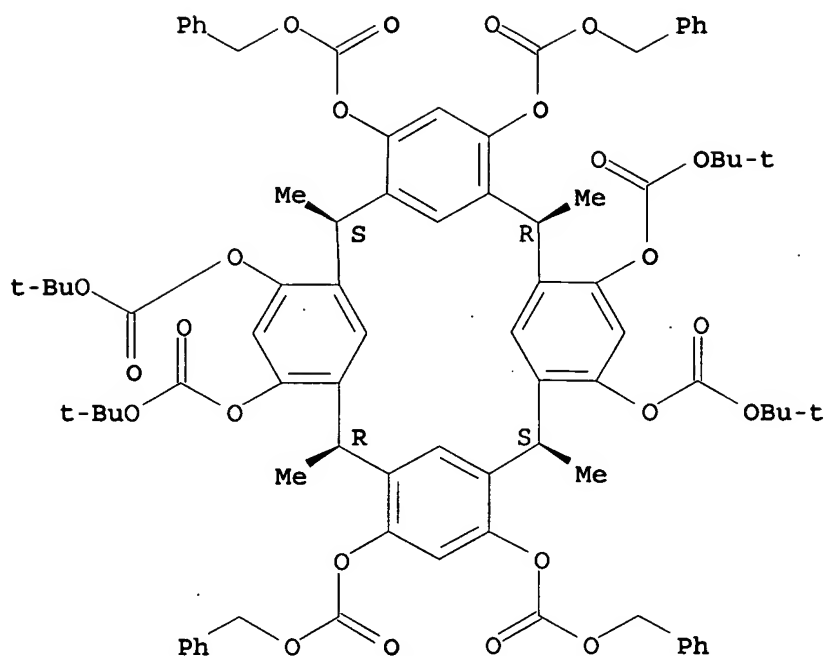
Relative stereochemistry.



RN 213666-82-1 HCAPLUS

CN Carbonic acid, (2R,8S,14R,20S)-10,12,22,24-tetrakis[[(1,1-dimethylethoxy)carbonyl]oxy]-2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacos-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,16,18-tetrayl tetrakis(phenylmethyl) ester, rel- (9CI)
(CA INDEX NAME)

Relative stereochemistry.

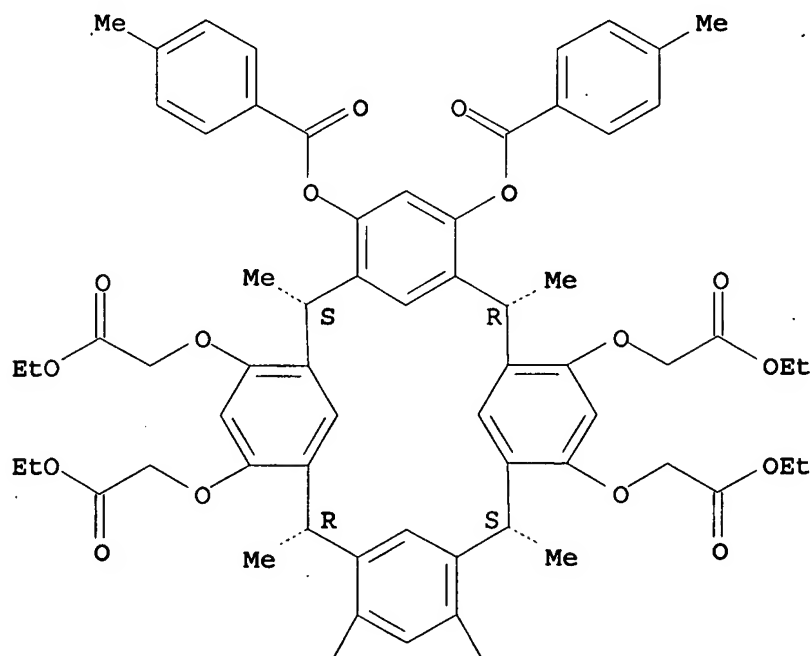


RN 213666-83-2 HCAPLUS

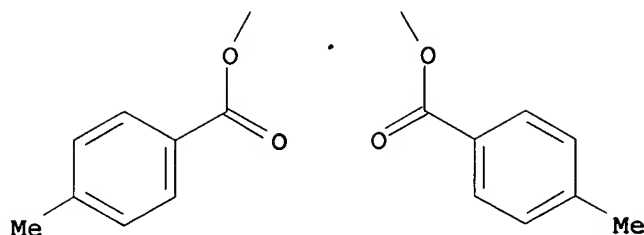
CN Benzoic acid, 4-methyl-, (2R,8S,14R,20S)-10,12,22,24-tetrakis(2-ethoxy-2-oxoethoxy)-2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacos-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,16,18-tetrayl ester, rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

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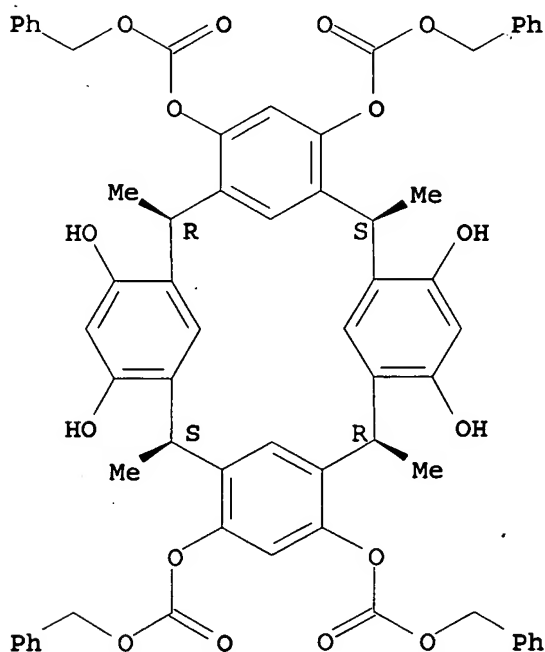
IT 213666-71-8P

(preparation and esterification of)

RN 213666-71-8 HCAPLUS

CN Carbonic acid, (2R,8S,14R,20S)-10,12,22,24-tetrahydroxy-2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacos-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,16,18-tetrayl tetrakis(phenylmethyl) ester, rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



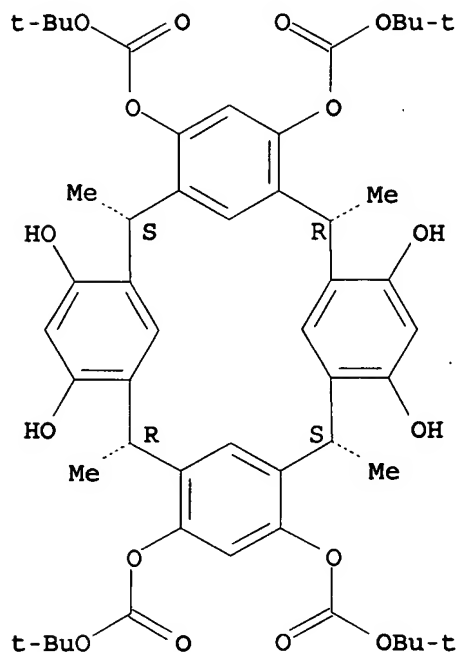
IT 213666-85-4P

(preparation and regioselective aminomethylation of)

RN 213666-85-4 HCAPLUS

CN Carbonic acid, (2R,8S,14R,20S)-10,12,22,24-tetrahydroxy-2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacos-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,16,18-tetrayl tetrakis(1,1-dimethylethyl) ester, rel- (9CI) (CA INDEX NAME)

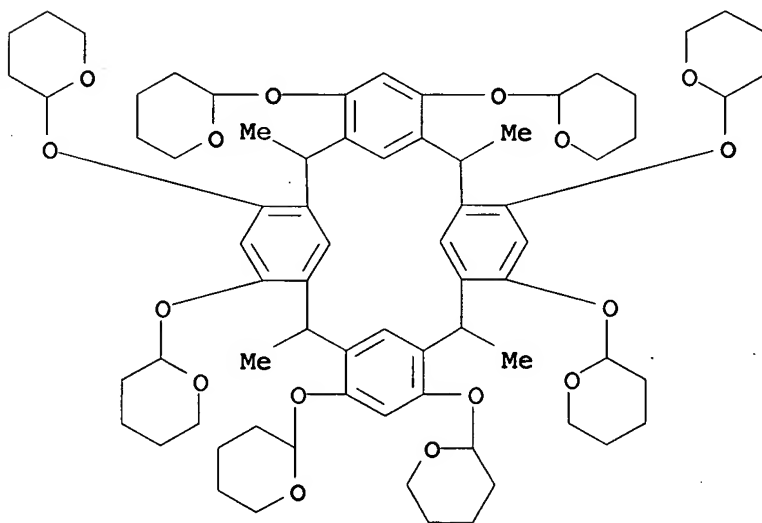
Relative stereochemistry.



CC 25-29 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)
 Section cross-reference(s): 75
 IT 213666-81-0P 213666-82-1P 213666-83-2P
 (preparation and catalytic hydrogenation of)
 IT 213666-71-8P
 (preparation and esterification of)
 IT 213666-85-4P
 (preparation and regioselective aminomethylation of)
 REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR
 THIS RECORD. ALL CITATIONS AVAILABLE IN THE
 RE FORMAT

L44 ANSWER 31 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1998:475830 HCAPLUS
 DOCUMENT NUMBER: 129:181991
 TITLE: Structural design of resin matrix and acid-labile
 dissolution inhibitor of chemical amplification
 positive electron-beam resist for gigabit
 lithography
 AUTHOR(S): Sakamizu, Toshio; Arai, Tadasi; Katoh, Kohji;
 Uchino, Shou-ichi; Murai, Fumio; Suzuki, Yasunori;
 Shiraishi, Hiroshi
 CORPORATE SOURCE: Cent. Res. Lab., Hitachi, Ltd., Kokubunji, Tokyo,
 185-8601, Japan
 SOURCE: Journal of Photopolymer Science and Technology (1998), 11(4), 547-552
 CODEN: JSTEEW; ISSN: 0914-9244
 PUBLISHER: Technical Association of Photopolymers, Japan
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 ED Entered STN: 03 Aug 1998

- AB The effect of m/p-cresol novolak mol.-weight-distribution (MWD) and dissoln. inhibitor structure on resist performance were investigated. A novolak resin richer in p-cresol ratio gave a large dissoln. inhibition capability of polymeric dissoln. inhibitor, tetrahydropyranyl (THP) protected-polymeric dissoln. inhibitor. In particular, a high mol.-weight novolak resin richer in p-cresol ratio was regarded as an effective matrix of a chemical amplification (CA) pos. resist. THP-protected phenolic compds. with extended backbone structures showed a large dissoln. inhibition. The resist with MWD controlled resin and a THP-protected phenolic compound can achieve high resolution patterns (100-nm contact holes) with high sensitivity (6.0 $\mu\text{C}/\text{cm}^2$).
- IT 211427-64-4
(effect of m/p-cresol novolak mol.-weight-distribution and phenolic dissoln. inhibitor structure on electron-beam lithog. resist performance)
- RN 211427-64-4 HCAPLUS
- CN 2H-Pyran, 2,2',2'',2''',2''''',2''''',2''''',2''''''-[(2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacosal(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octayl)octakis(oxy)]octakis[tetrahydro- (9CI) (CA INDEX NAME)

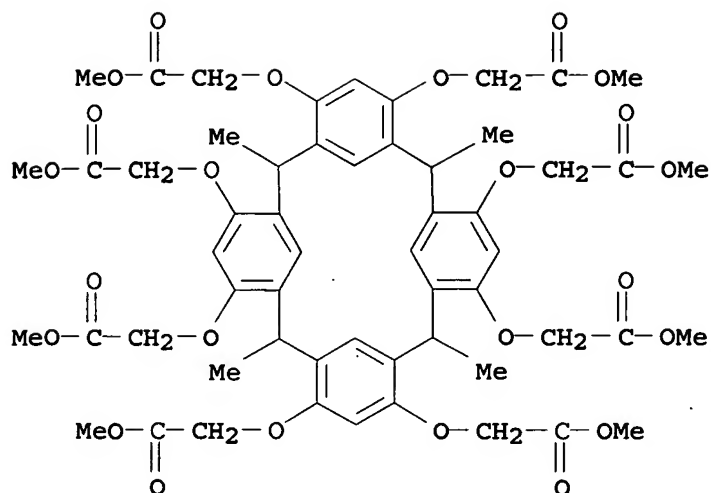


- CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
- IT 23358-99-8 27029-76-1, m-Cresol-p-cresol-formaldehyde copolymer
79267-06-4, 2,6-Bis(hydroxymethyl)-p-cresol-m-Cresol-p-cresol-formaldehyde copolymer 211427-63-3 211427-64-4
211427-65-5
(effect of m/p-cresol novolak mol.-weight-distribution and phenolic dissoln. inhibitor structure on electron-beam lithog. resist performance)

REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L44 ANSWER 32 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1998:37489 HCAPLUS

USHA SHRESTHA EIC 1700 REM 4B31



CC 80-4 (Organic Analytical Chemistry)

IT 96-32-2, Methyl bromoacetate 169888-22-6 202999-14-2
203063-80-3

(in preparation of resorcarene-octacarboxylic acids as pseudostationary phases for separation of amines by electrokinetic chromatog.)

REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L44 ANSWER 33 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1997:582349 HCAPLUS

DOCUMENT NUMBER: 127:270381

TITLE: A positive-working alkaline developable photoresist based on benzylether dendrimer and a dissolution inhibitor

AUTHOR(S): Haba, Osamu; Haga, Kohji; Ueda, Mitsuru
CORPORATE SOURCE: Department of Human Sensing and Functional Sensor engineering, Graduate School of Engineering, Yamagata University, Yonezawa, 992, Japan

SOURCE: Polymeric Materials Science and Engineering (1997), 77, 426-427

CODEN: PMSSEDG; ISSN: 0743-0515

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 12 Sep 1997

AB Dendrimers are polymers with a new mol. architecture, which is characterized by possessing central poly-functional core, from which arise successive layers of monomer units with a branch occurring at each monomer unit. They are monodisperse materials as well as the calixarene, and their mol. weight reaches ten thousands as well as the novolak resin. Thus the dendrimers are promising material for high sensitive photoresists. We designed a new dendrimer which contains phenol groups in the exterior to be soluble in aqueous alkaline solution

and calix[4]resorcinarene in the interior to increase the number of the phenol group even in the lower generation. We now report new pos.-working alkaline developable photoresist based on this dendrimer.

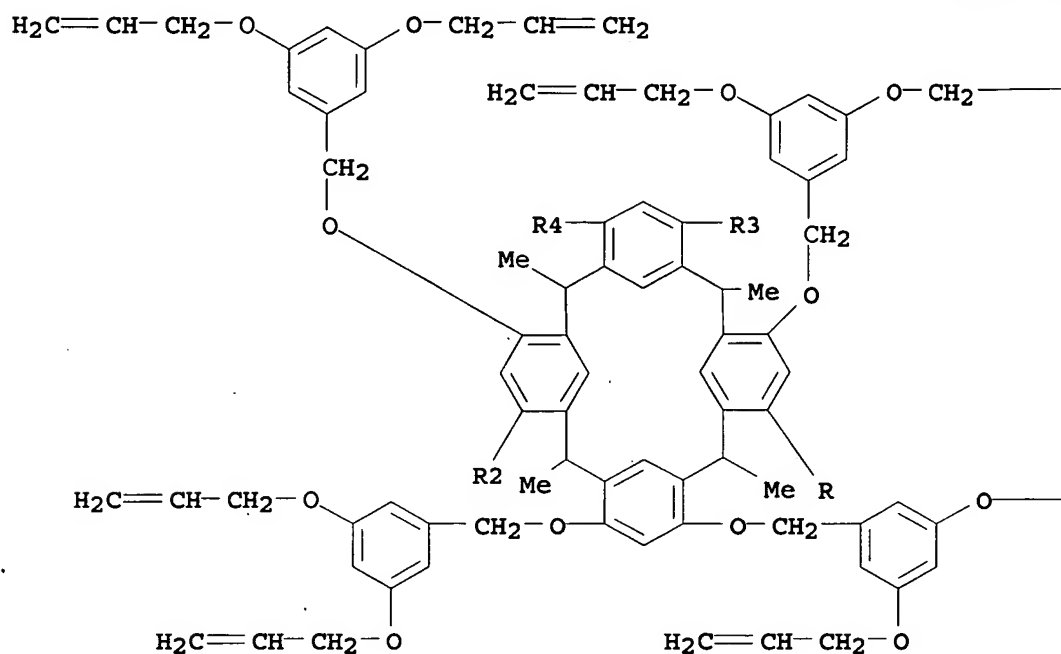
IT 196298-31-4P

(pos.-working alkaline developable photoresist based on
benzyl-ether dendrimer and dissoln. inhibitor)

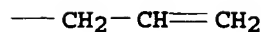
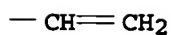
RN 196298-31-4 HCAPLUS

CN Pentacyclo[19.3.1.13,7.19,13.115,19]octacos-
1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene,
4,6,10,12,16,18,22,24-octakis[[3,5-bis(2-propenyloxy)phenyl]methoxy]-
2,8,14,20-tetramethyl- (9CI) (CA INDEX NAME)

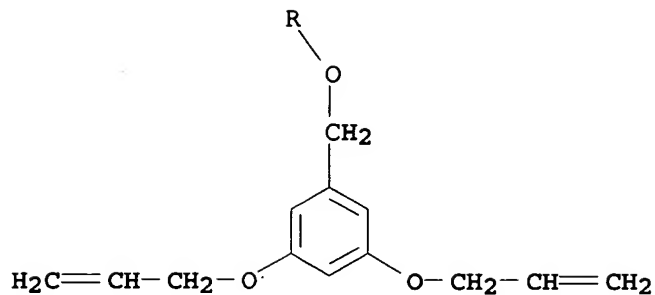
PAGE 1-A



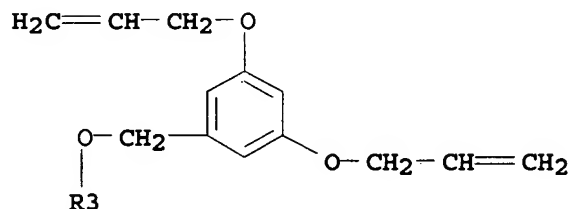
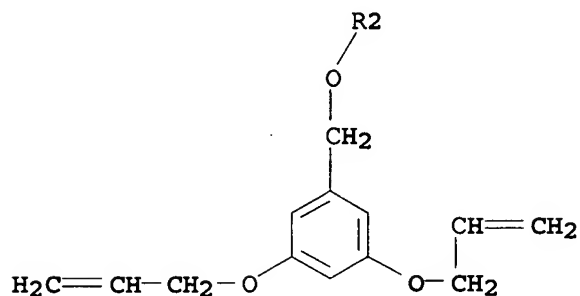
PAGE 1-B



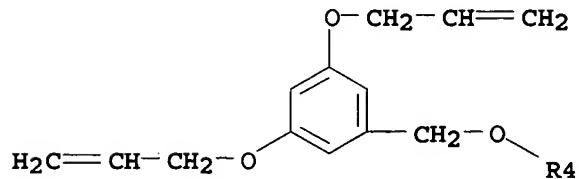
PAGE 2-A



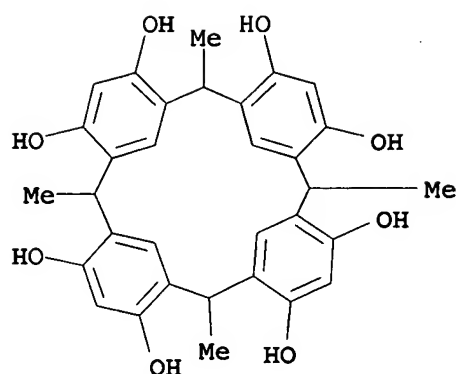
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IT 65338-98-9, Calix[4]resorcinarene
 (pos.-working alkaline developable photoresist based on
 benzyl-ether dendrimer and dissoln. inhibitor)
 RN 65338-98-9 HCAPLUS
 CN Pentacyclo[19.3.1.13,7.19,13.115,19]octacos-
 1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-
 4,6,10,12,16,18,22,24-octol, 2,8,14,20-tetramethyl- (CA INDEX NAME)



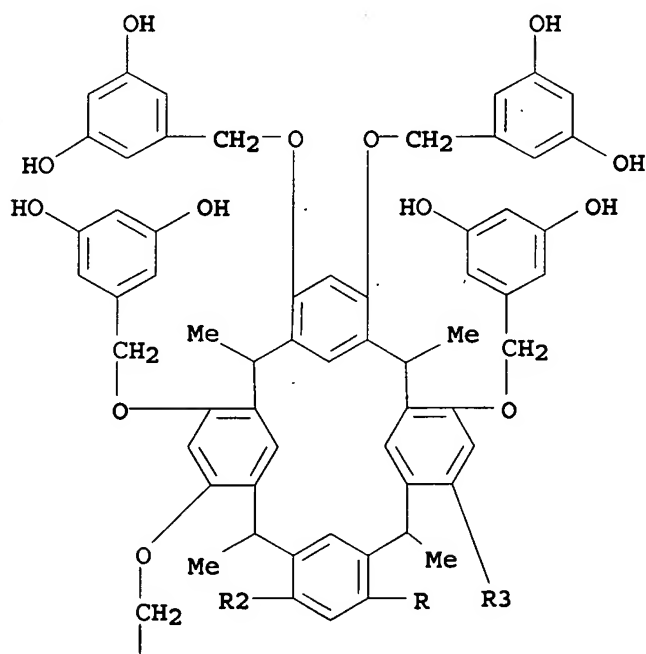
IT 196298-30-3P

(pos.-working alkaline developable photoresist based on benzyl-ether dendrimer and dissoln. inhibitor)

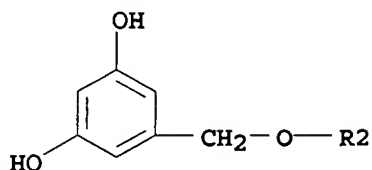
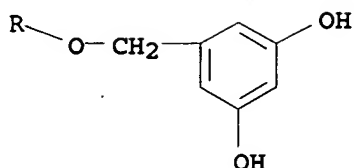
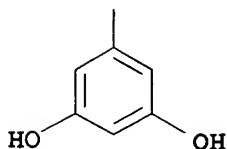
RN 196298-30-3 HCAPLUS

CN 1,3-Benzenediol, 5,5',5'',5''',5'''',5''''',5''''',5''''''-
[(2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacos-
1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-
4,6,10,12,16,18,22,24-octayl)octakis(oxymethylene)]octakis-(9CI) (CA
INDEX NAME)

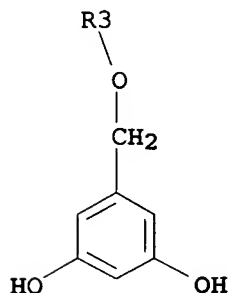
PAGE 1-A



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- CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
- ST pos alk developable **photoresist** benzylether dendrimer
- IT **Photoresists**
 (pos.-working alkaline developable **photoresist** based on benzyl-ether dendrimer and dissoln. inhibitor)
- IT Dendritic polymers
 (pos.-working alkaline developable **photoresist** based on benzyl-ether dendrimer and dissoln. inhibitor)
- IT 84522-08-7, 2,3,4-Tris(1-oxo-2-diazonaphthoquinone-4-sulfonyloxy)benzophenone
 (dissoln. inhibitor; pos.-working alkaline developable **photoresist** based on benzyl-ether dendrimer and dissoln. inhibitor)
- IT 135710-38-2 177837-80-8 182058-69-1
 (pos.-working alkaline developable **photoresist** based on benzyl-ether dendrimer and dissoln. inhibitor)

IT 67-64-1, 2-Propanone, uses 75-59-2, Tetramethylammonium hydroxide
109-99-9, THF, uses 111-96-6, Bis(2-methoxyethyl)ether 123-91-1,
1,4-Dioxane, uses

(pos.-working alkaline developable photoresist based on
benzyl-ether dendrimer and dissoln. inhibitor)

IT 196298-31-4P

(pos.-working alkaline developable photoresist based on
benzyl-ether dendrimer and dissoln. inhibitor)

IT 106-95-6, 3-Bromopropene, reactions 540-69-2, Ammonium formate
558-13-4, Carbon bromide (CBr₄) 584-08-7, Potassium carbonate
(K₂CO₃) 603-35-0, Triphenylphosphine, reactions 2150-44-9,
Methyl-3,5-dihydroxy-benzoate 7681-82-5, Sodium iodide (NaI),
reactions 13965-03-2, Bis(triphenylphosphine)palladium dichloride
16853-85-3 17455-13-9, 1,4,7,10,13,16-Hexaoxacyclooctadecane
53208-22-3, Diazonaphthoquinone 65338-98-9,
Calix[4]resorcinarene

(pos.-working alkaline developable photoresist based on
benzyl-ether dendrimer and dissoln. inhibitor)

IT 196298-30-3P

(pos.-working alkaline developable photoresist based on
benzyl-ether dendrimer and dissoln. inhibitor)

L44 ANSWER 34 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1997:248299 HCAPLUS

DOCUMENT NUMBER: 126:343376

TITLE: Synthesis and solvent inclusion complexation
studies of benzoyl derivatives of
resorcinol-aldehyde tetramers by ¹H NMR and
thermogravimetric analysis

AUTHOR(S): Singh, Harmit; Singh, Serjinder

CORPORATE SOURCE: Dep. Food Sci. and Technol., Guru Nanak Dev Univ.,
Amritsar, 143005, India

SOURCE: Journal of Chemical Research, Synopses (
1997), (3), 72-73

CODEN: JRPSDC; ISSN: 0308-2342

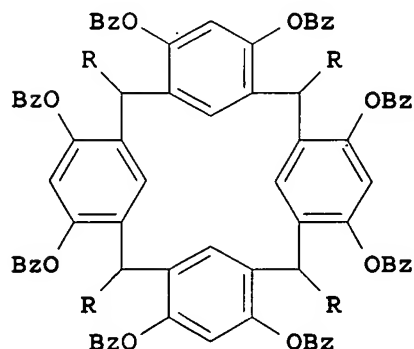
PUBLISHER: Royal Society of Chemistry

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 17 Apr 1997

GI



I

AB Resorcinol-aldehyde cyclophane benzoyl derivs. I [R = Me, Ph,
4-(benzoyloxy)phenyl] have been synthesized in order to observe their
binding behavior in inclusion complex formation with solvent mols.

using thermogravimetric and ¹H NMR techniques.

IT 189767-13-3P

(inclusion complexation by benzoyl derivs. of resorcinol-aldehyde tetramers)

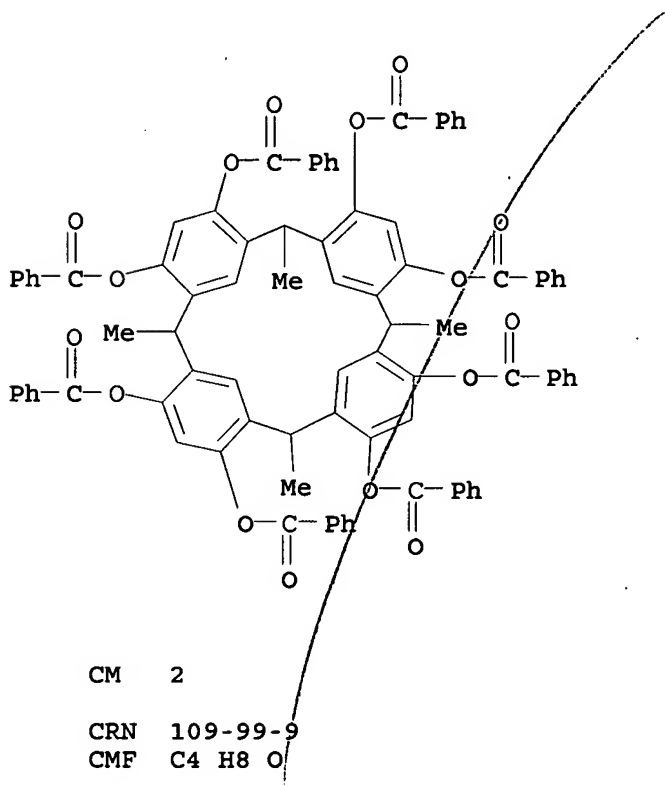
RN 189767-13-3 HCAPLUS

CN Pentacyclo[19.3.1.13,7.19,13.115,19]octacos-
1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-
4,6,10,12,16,18,22,24-octol, 2,8,14,20-tetramethyl-, octabenzate,
stereoisomer, compd. with tetrahydrofuran (1:3) (9CI) (CA INDEX NAME)

CM 1

CRN 136429-58-8

CMF C88 H64 O16



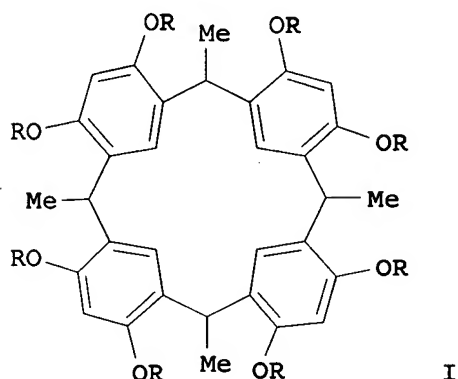
CC 25-29 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)
Section cross-reference(s): 22

IT 189767-06-4P 189767-07-5P 189767-08-6P 189767-09-7P
189767-10-0P 189767-11-1P 189767-12-2P 189767-13-3P
189767-14-4P 189767-15-5P 189767-16-6P 189767-17-7P
189767-18-8P 189767-19-9P 189767-20-2P 189767-21-3P
189767-22-4P

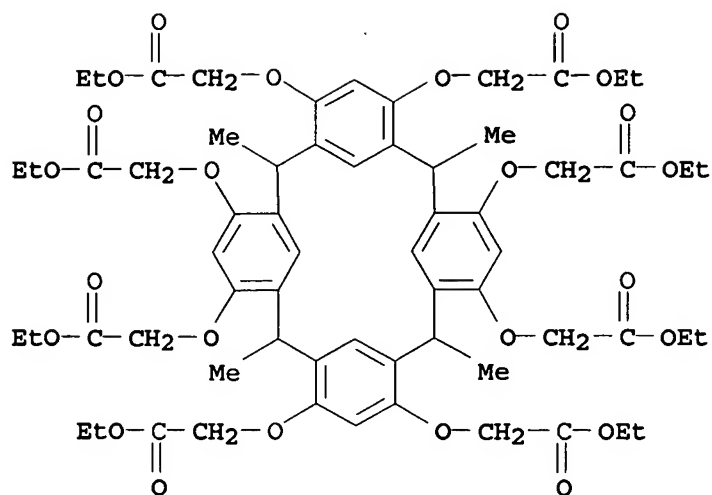
(inclusion complexation by benzoyl derivs. of resorcinol-aldehyde tetramers)

L44 ANSWER 35 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1997:7345 HCAPLUS
DOCUMENT NUMBER: 126:117630
TITLE: A calixresorcinarene provides the framework for an
artificial esterase
AUTHOR(S): Pirrincioglu, Necmettin; Zaman, Flora; Williams,
Andrew
CORPORATE SOURCE: Dep. Chem., Univ. Kent, Canterbury, Kent, CT2 7NH,
UK
SOURCE: Journal of the Chemical Society, Perkin
Transactions 2: Physical Organic Chemistry (
1996), (12), 2561-2562
CODEN: JCPKBH; ISSN: 0300-9580
PUBLISHER: Royal Society of Chemistry
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 08 Jan 1997
GI



AB	An octakis(dimethylaminopropyl)calixresorcin[4]arene [I; R = CH ₂ CONH(CH ₂) ₃ NMe ₂] is a primitive artificial esterase for 4-nitrophenyl esters. The system provides both concave binding site and catalytic function within the same mol.
IT	171799-35-2P (calixresorcinarene as an artificial esterase for 4-nitrophenyl esters)
RN	171799-35-2 HCAPLUS
CN	Acetic acid, 2,2',2'',2''',2''''',2''''',2''''',2''''''-[[2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacos-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octayl]octakis(oxy)]octakis-, 1,1',1'',1''',1''''',1''''',1''''',1''''''-octaethyl ester (CA INDEX NAME)



CC 22-4 (Physical Organic Chemistry)

Section cross-reference(s): 7

IT 65338-98-9P 171799-35-2P

(calixresorcinarene as an artificial esterase for 4-nitrophenyl esters)

REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L44 ANSWER 36 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1996:605706 HCAPLUS

DOCUMENT NUMBER: 125:261903

TITLE: Mesomorphic properties and monolayer behavior of novel liquid crystalline exo-calix[4]arene derivatives

AUTHOR(S): Budig, Hansjoerg; Diele, Siegmur; Paschke, Reinhard; Stroehl, Dieter; Tschierske, Carsten
CORPORATE SOURCE: Inst. Org. Chem., Martin-Luther Univ., Halle/Saale, D-06120, Germany

SOURCE: Journal of the Chemical Society, Perkin Transactions 2: Physical Organic Chemistry (1996), (9), 1901-1906
CODEN: JCPKBH; ISSN: 0300-9580

PUBLISHER: Royal Society of Chemistry

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 11 Oct 1996

AB Novel calix[4]arene derivs. were synthesized. These are pyrogallol-derived exo-calix[4]arenes with twelve 3-oxaalkanoyloxy chains and exo-calix[4]arenes in which eight or twelve rod-like units (phenylthiadiazole and phenylpyrimidine units) are fixed via spacers with the calix[4]arene central core. The liquid crystalline properties of these compds. were studied by thermal optical microscopy between crossed polarizers, by DSC and some of them also by x-ray diffraction. One of the 3-oxaalkanoates forms a hexagonal columnar mesophase, whereas most of the compds. incorporating calamitic units in the lateral chains give liquid crystalline materials with a smectic A-phase. Also the behavior of selected compds. as thin films at the air-H2O interface was studied using the Langmuir technique. They form condensed films whereby the mol. areas at the collapse points are

determined by the densely packed lateral chains.

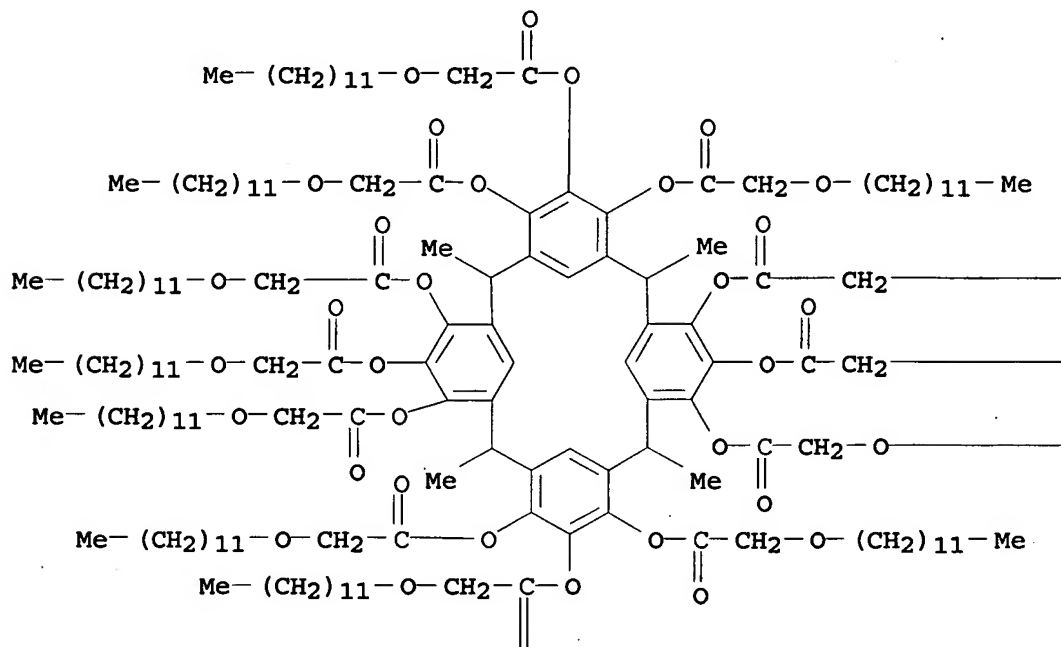
IT 182225-44-1P

(preparation and liquid crystal properties and monolayer behavior of)

RN 182225-44-1 HCAPLUS

CN Acetic acid, (dodecyloxy)-, 2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacos-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,5,6,10,11,12,16,17,18,22,23,24-dodecyl ester (9CI) (CA INDEX NAME)

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$-\text{O}-(\text{CH}_2)_{11}-\text{Me}$

$-\text{O}-(\text{CH}_2)_{11}-\text{Me}$

$-(\text{CH}_2)_{11}-\text{Me}$

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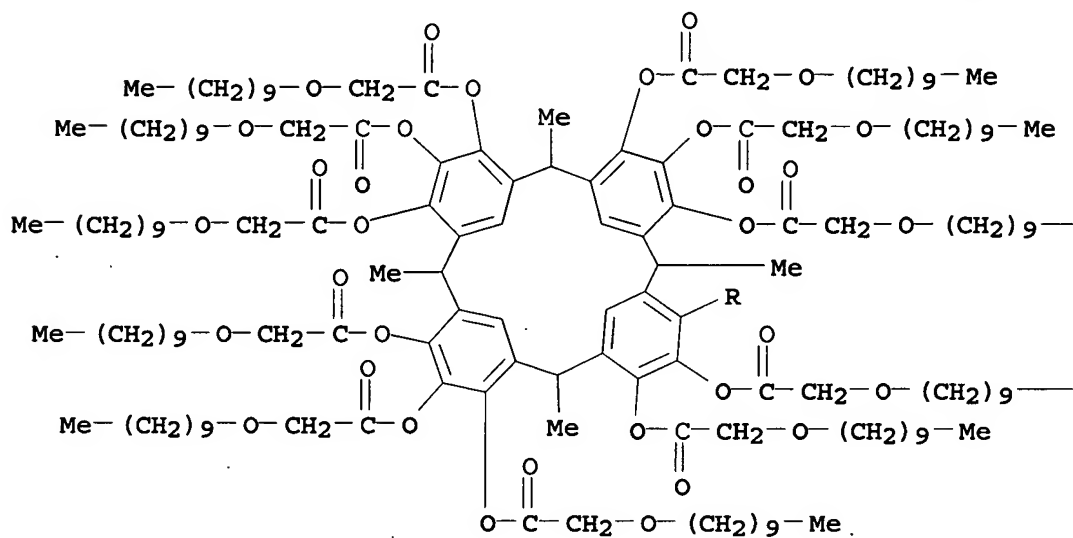
IT 153497-75-7P

(preparation and melting temperature of)

RN 153497-75-7 HCAPLUS

CN Acetic acid, (decyloxy)-, 2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacos-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octayl ester (9CI) (CA INDEX NAME)

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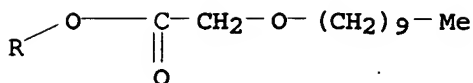


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— Me

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CC 75-11 (Crystallography and Liquid Crystals)
 Section cross-reference(s): 25
 IT 182225-44-1P 182371-71-7P 182371-74-0P 182371-76-2P
 (preparation and liquid crystal properties and monolayer behavior of)
 IT 153497-75-7P 182371-72-8P 182371-75-1P
 (preparation and melting temperature of)

L44 ANSWER 37 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1995:994163 HCAPLUS

DOCUMENT NUMBER: 124:55584

TITLE: Preparation of calixarene-based compounds having antibacterial, antifungal, anticancer, and anti-HIV activity

INVENTOR(S): Harris, Stephen J.

PATENT ASSIGNEE(S): Ire.

SOURCE: PCT Int. Appl., 148 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9519974	A2	19950727	WO 1995-IE8	19950124
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WO 9519974	A3	19950921		
W: AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, FI, GB, HU, JP, KP, LU, NO, RO, UA, US				
RW: AT, BE, CH, DE, ES, FR, GB, GR, IE, LU, NL, SE, GA, ML, NE, SN, TD, TG				
AU 9515453	A	19950808	AU 1995-15453	19950124
<--				
PRIORITY APPLN. INFO.:			IE 1994-57	A 19940124
<--				
			WO 1995-IE8	A 19950124
<--				

OTHER SOURCE(S): MARPAT 124:55584

ED Entered STN: 22 Dec 1995

GI For diagram(s), see printed CA Issue.

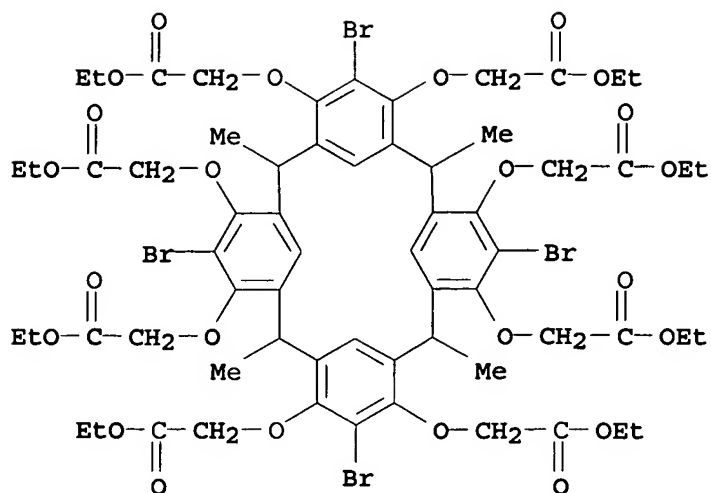
AB Calixarene-based compds., which are calixarenes or oxacalixarenes, acyclic phenyl-formaldehyde oligomers, cyclotrimeratrylene derivs., cyclic tetrameric resorcinol-aldehyde derivs. known as Hogberg compds. and cyclic tetrameric pyrogallol-aldehyde derivs., are prepared For example, calixarenes or oxacalixarenes are represented by general formula [I; n + m = 3-8; m = 0-3; n = 0-8; R1 = H, halo, hydrocarbyl, aryl, (un)substituted hydrocarbylaryl, NO2, SO3M1; wherein M1 = alkali metal, SO3H; R1 = OR2; wherein R2 = CH2CO2R3, CH2CO2Mp/p, CH2CONR4R5; wherein R3 = (un)substituted alkyl; M = metal, ammonium ion; p = the charge on the metal ion; R4 or R5 may be the same or different, or both may be part of amino acid ester of poly(amino acid ester) or one or more of the same or different amino acids or part of a cyclic polyene antibiotic/antifungal drug or part of a cyclic nitrogen

IT 171799-35-2P 171799-38-5P

RN 171799-35-2 HCAPLUS

The chemical structure shows a macrocyclic compound consisting of four benzene rings connected by six methylene (-CH₂-) groups. Each benzene ring has a methyl group (-Me) and an ester group (-OCH₂-C(=O)-OEt) attached to it. The ester groups are arranged in a regular pattern around the macrocycle.

CN Acetic acid, 2,2',2'',2''',2'''',2''''',2''''',2''''''-[(5,11,17,23-tetrabromo-2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacosane-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octayl)octakis(oxy)]octakis-, octaethyl ester
(9CI) (CA INDEX NAME)



IC C07D313-00

CC 25-19 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)
Section cross-reference(s): 1

IT 42042-78-4P	65338-98-9P	85097-22-9P	92003-62-8P	97600-39-0P
97600-49-2P	109051-63-0P	110242-20-1P	114155-16-7P	
116352-85-3P	116851-59-3P	119191-55-8P	121328-56-1P	
122638-96-4P	122638-98-6P	123240-79-9P	123795-01-7P	
125583-08-6P	130508-38-2P	133352-88-2P	133801-01-1P	
135269-76-0P	137331-37-4P	144508-92-9P	146074-86-4P	
148516-05-6P	154160-91-5DP,	partial substituted p-nitro-		
154160-91-5P	162714-63-8P	171797-87-8P	171797-88-9P	
171797-89-0P	171797-90-3P	171797-91-4P	171797-92-5P	
171797-93-6P	171797-94-7P	171797-95-8P	171797-97-0P	
171797-98-1P	171797-99-2P	171798-00-8P	171798-01-9P	
171798-02-0P	171798-03-1P	171798-04-2P	171798-05-3P	
171798-07-5P	171798-08-6P	171798-09-7P	171798-10-0P	
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171798-20-2P	171798-21-3P	171798-22-4P	171798-23-5P	
171798-24-6P	171798-25-7P	171798-26-8P	171798-27-9P	
171798-28-0P	171798-29-1P	171798-31-5P	171798-32-6P	
171798-33-7P	171798-34-8P	171798-35-9P	171798-37-1P	
171798-38-2P	171798-39-3P	171798-40-6P	171798-41-7P	
171798-42-8P	171798-43-9P	171798-44-0P	171798-45-1P	
171798-47-3P	171798-48-4P	171798-49-5P	171798-50-8P	
171798-51-9P	171798-52-0P	171798-53-1P	171798-54-2P	
171798-55-3P	171798-57-5P	171798-58-6P	171798-59-7P	
171798-60-0P	171798-61-1P	171798-62-2P	171798-64-4P	
171798-65-5P	171798-66-6P	171798-67-7P	171798-69-9P	
171798-72-4P	171798-73-5P	171798-74-6P	171798-75-7P	
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171798-80-4P	171798-81-5P	171798-82-6P	171798-83-7P	
171798-84-8P	171798-85-9P	171798-86-0P	171798-87-1P	
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171798-92-8P	171798-93-9P	171798-94-0P	171798-95-1P	
171798-96-2P	171798-97-3P	171798-98-4P	171798-99-5P	
171799-00-1P	171799-01-2P	171799-02-3P	171799-03-4P	
171799-04-5P	171799-05-6P	171799-06-7P	171799-07-8P	
171799-08-9P	171799-09-0P	171799-10-3P	171799-11-4P	
171799-12-5P	171799-13-6P	171799-14-7P	171799-15-8P	

171799-16-9P	171799-17-0P	171799-18-1P	171799-19-2P
171799-20-5P	171799-21-6P	171799-22-7P	171799-23-8P
171799-24-9P	171799-25-0P	171799-26-1P	171799-27-2P
171799-28-3P	171799-29-4P	171799-30-7P	171799-31-8P
171799-32-9P	171799-33-0P	171799-34-1P	171799-35-2P
171799-36-3P	171799-37-4P	171799-38-5P	171799-39-6P
171799-40-9P	171799-41-0P	171799-42-1P	171799-43-2P
171799-44-3P	171799-45-4P	171799-46-5P	171799-47-6P
171799-48-7P	171799-49-8P	171799-50-1P	171799-51-2P
171799-52-3P	171799-53-4P	171799-54-5P	171799-55-6P
171799-56-7P	171799-57-8P	171799-58-9P	171799-59-0P
171799-60-3P	171799-61-4P	171799-62-5P	171799-63-6P
171799-64-7P	171799-65-8P	171799-66-9P	171799-67-0P
171799-68-1P	171799-69-2P	171799-70-5P	171799-71-6P
171799-72-7P	171799-73-8P	171799-74-9P	171799-75-0P
171799-76-1P	171799-77-2P	171799-78-3P	171799-79-4P
171799-80-7P	171799-81-8P	171799-82-9P	171799-83-0P
171799-84-1P	171799-85-2P	171799-86-3P	171799-87-4P
171799-88-5P	171799-89-6P	171799-90-9P	171799-91-0P
171799-92-1P	171799-93-2P	171799-94-3P	171799-95-4P
171799-96-5P	171799-97-6P	171799-98-7P	171799-99-8P
171800-00-3P	171800-01-4P	171800-02-5P	171800-03-6P
171800-04-7P	171800-05-8P	171800-06-9P	171800-07-0P
171800-08-1P			

(preparation of calixarene-based compds. having antibacterial, antifungal, anticancer, and anti-HIV activity)

L44 ANSWER 38 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1994:507688 HCAPLUS

DOCUMENT NUMBER: 121:107688

TITLE: Bowl shaped molecules as enzyme models

AUTHOR(S): Singh, Serjinder; Singh, Harmit; Sharma, Lalit

CORPORATE SOURCE: Dep. Chem., Guru Nanak Dev Univ., Amritsar, 143-005, India

SOURCE: Indian Journal of Chemistry, Section B: Organic Chemistry Including Medicinal Chemistry (1994), 33B(5), 428-31

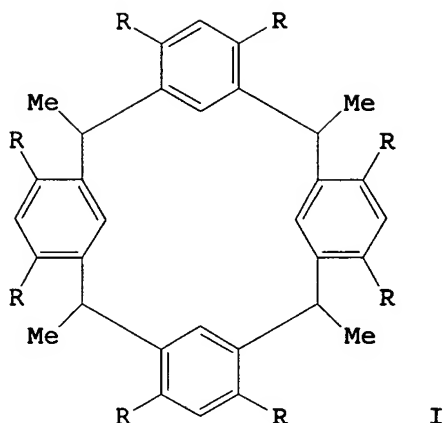
CODEN: IJSBDB; ISSN: 0376-4699

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 03 Sep 1994

GI



AB Resorcinol-aldehyde tetramers [I; R=OH, OCOMe (II), OCH₂COOH] possessing bowl shaped structures with hydrophobic cavity, prepared under acidic conditions, have been studied by ¹H NMR spectral studies are shown to form host-guest complexes with a variety of guests like pyridinium methiodides. These cyclophanes help in solubilizing different hydrocarbons in the aqueous phase. Although the discrimination favors benzene due to its complementarity to the cavity, the association constant is higher valued for acetophenone showing that hydrogen-bonding plays an important role in host-guest complex formation. The host-guest complexation is further utilized to catalyze or inhibit the hydrolysis of N-methyl-p-nitrophenylnicotinium iodide and aminolysis of tetramer II as compared to resorcinol diacetate with different amines.

IT 156544-05-7P

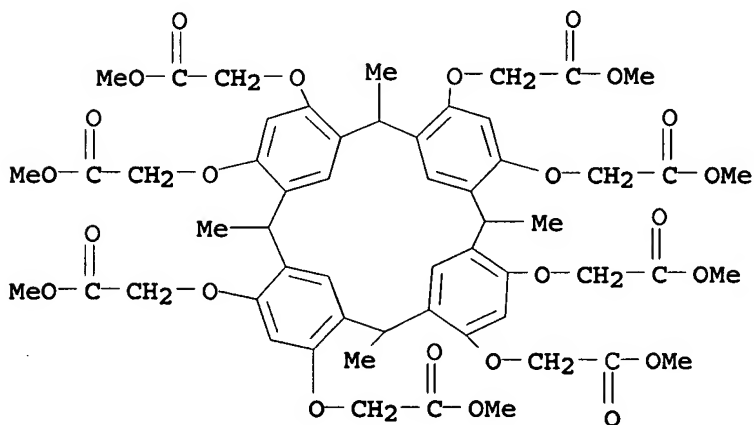
(preparation of)

RN 156544-05-7 HCAPLUS

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CN      Acetic acid, 2,2',2'',2''',2''',2''',2''',2''''-(2,8,14,20-
tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacos-
1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-
4,6,10,12,16,18,22,24-octayl)octakis(oxy)]octakis-,
1,1',1'',1''',1''',1''',1''',1''''-octamethyl ester  (CA
INDEX NAME)

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CC 22-4 (Physical Organic Chemistry)
 IT 156544-05-7P
 (preparation of)

L44 ANSWER 39 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1994:205125 HCAPLUS

DOCUMENT NUMBER: 120:205125

TITLE: Bowl-shaped liquid crystals - new derivatives of cyclotrimeratrylene and calix[4]arene

AUTHOR(S): Budig, H.; Paschke, R.; Diele, S.; Letko, I.; Pelzl, G.

CORPORATE SOURCE: Inst. Org. Chem., Martin-Luther-Univ., Halle/Saale, D-06120, Germany

SOURCE: Berichte der Bunsen-Gesellschaft (1993), 97(10), 1355-7

CODEN: BBPCAX; ISSN: 0005-9021

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 16 Apr 1994

AB Some new Calix[4]arenes and Cyclotrimeratrylenes incorporating cyclohexane rings, Ph rings or ether O atoms in their lateral chains were synthesized and studied by calorimetry and x-ray studies. Only some long chain calix[4]arenes exhibit mesomorphic behavior. The mesomorphic ranges and clearing temps. of the mesophases of hexasubstituted cyclotrimeratrylenes are largely increased by the introduction of cyclohexane rings or O atoms into the alkyl chains. X-ray studies proved the columnar structure of the mesophases.

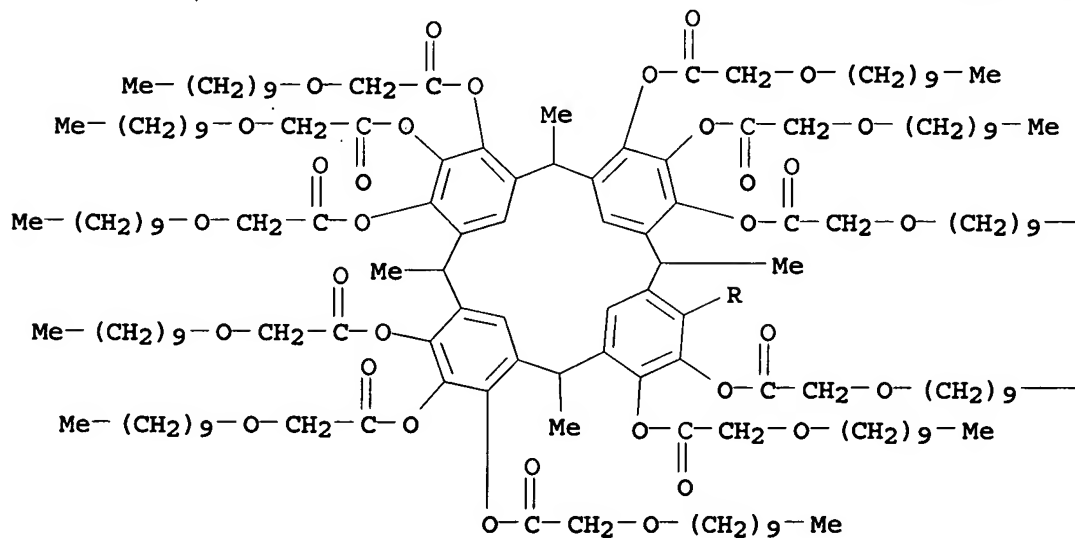
IT 153497-75-7P

(liquid crystal, preparation and properties of)

RN 153497-75-7 HCAPLUS

CN Acetic acid, (decyloxy)-, 2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacos-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octayl ester (9CI) (CA INDEX NAME)

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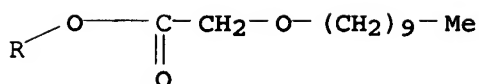


PAGE 1-B

— Me

— Me

PAGE 2-A



CC 75-11 (Crystallography and Liquid Crystals)
 IT 153497-67-7P 153497-68-8P 153497-69-9P 153497-70-2P
 153497-71-3P 153497-72-4P 153497-73-5P 153497-74-6P
 153497-75-7P 153547-56-9P 153603-05-5P
 (liquid crystal, preparation and properties of)

L44 ANSWER 40 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1991:92279 HCAPLUS

DOCUMENT NUMBER: 114:92279

TITLE: New columnar liquid crystals. Correlation between
 molecular structure and mesomorphic behavior

AUTHOR(S): Bonsignore, S.; Cometti, G.; Dalcanale, E.; Du
 Vosel, A.

CORPORATE SOURCE: Ist. G. Donegani, Novara, I-28100, Italy

SOURCE: Liquid Crystals (1990), 8(5), 639-49

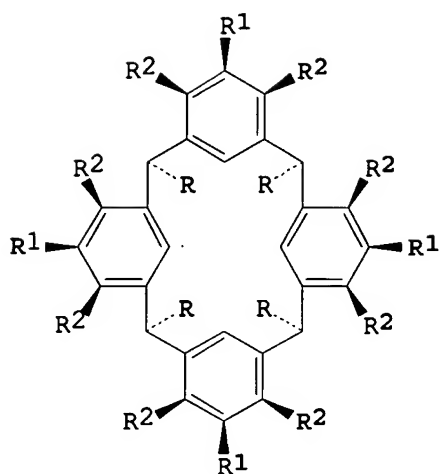
CODEN: LICRE6; ISSN: 0267-8292

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 09 Mar 1991

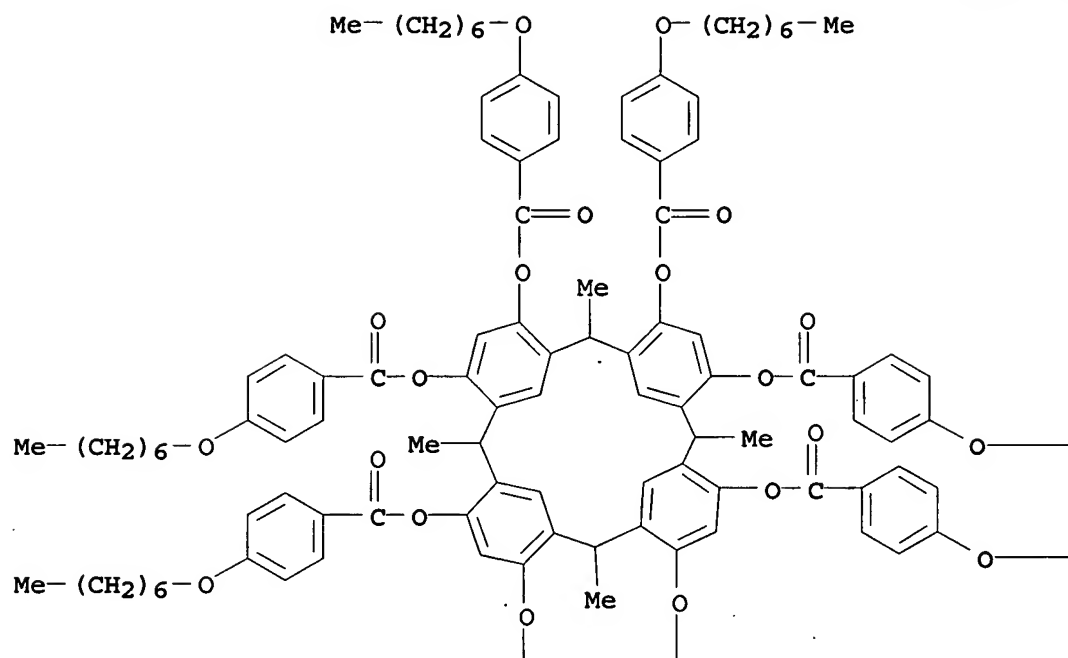
GI



I

- AB The effect of mol. structural changes on the mesomorphic nature of a new class of macrocyclic columnar liquid crystals is reported. Twenty-six new compds. with general mol. structure I were prepared, characterized and compared. Only dodecasubstituted ester derivs. exhibit thermotropic mesophases. The design of mesogens based on these new, unusual macrocyclic cores requires the presence of the following structural elements: 12 aliphatic side chains, esters as bridging units and small R groups on the core.
- IT 131356-38-2P 131433-88-0P 131484-82-7P
(liquid crystal, preparation and transition temps. of)
- RN 131356-38-2 HCAPLUS
- CN Benzoic acid, 4-(heptyloxy)-, 2,8,14,20-tetramethylpentacyclo[19.3.1.1.3,7.19,13.115,19]octacos-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octayl ester, stereoisomer (9CI)
(CA INDEX NAME)

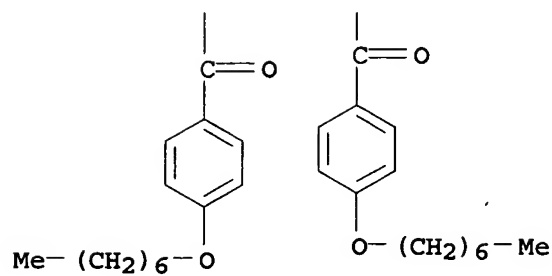
PAGE 1-A



PAGE 1-B

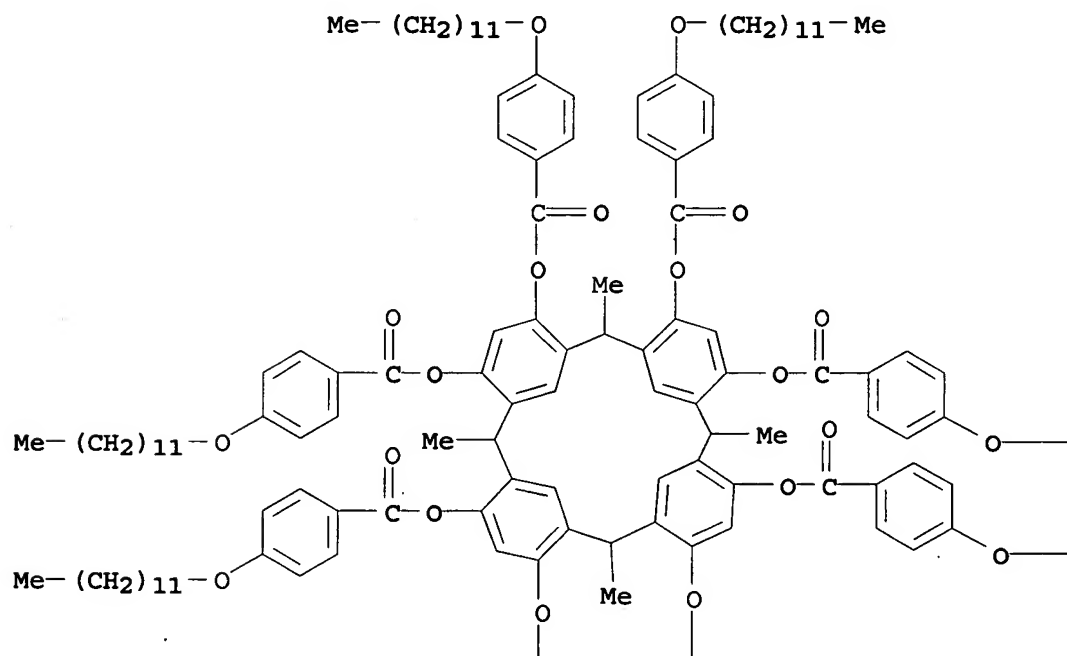
— (CH₂)₆—Me— (CH₂)₆—Me

PAGE 2-A



RN 131433-88-0 HCAPLUS
 CN Benzoic acid, 4-(dodecyloxy)-, 2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacos-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octayl ester, stereoisomer (9CI)
 (CA INDEX NAME)

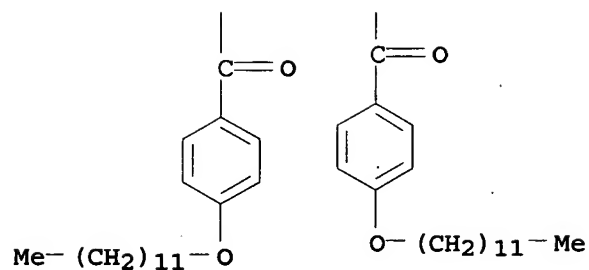
PAGE 1-A



PAGE 1-B

— (CH₂)₁₁—Me— (CH₂)₁₁—Me

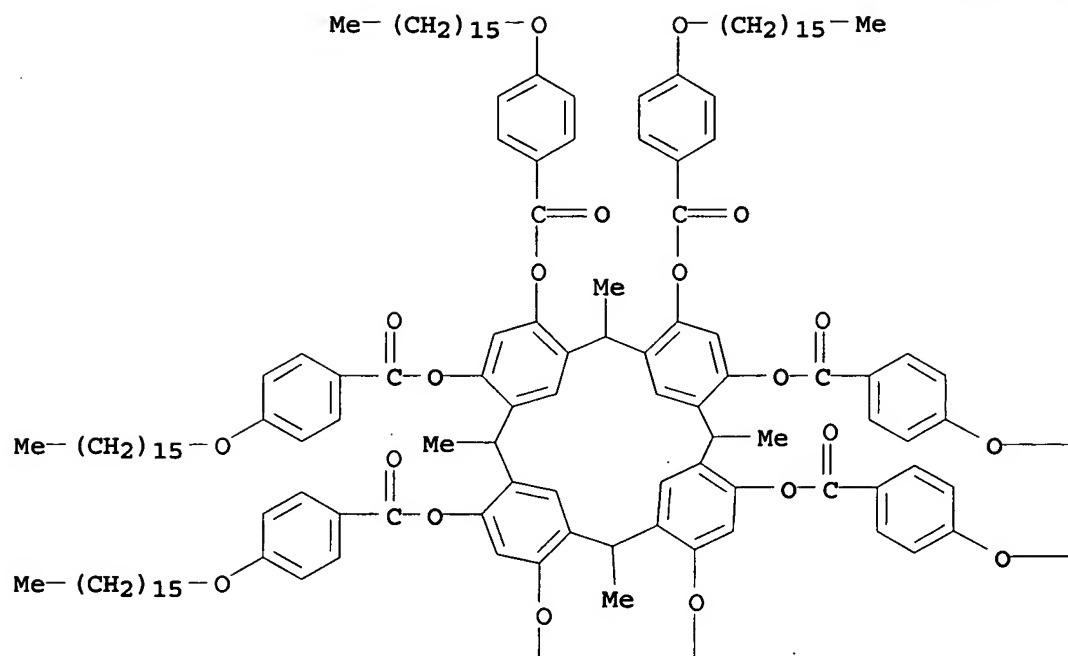
PAGE 2-A



RN 131484-82-7 HCAPLUS

CN Benzoic acid, 4-(hexadecyloxy)-, 2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacos-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octayl ester, stereoisomer (9CI) (CA INDEX NAME)

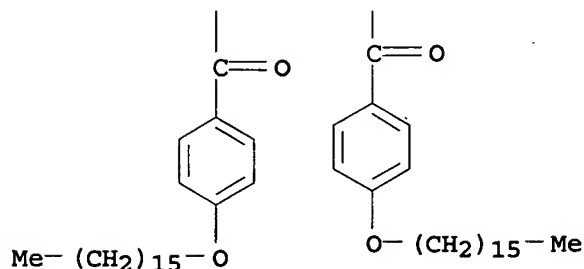
PAGE 1-A



PAGE 1-B

 $-(\text{CH}_2)_{15}-\text{Me}$ $-(\text{CH}_2)_{15}-\text{Me}$

PAGE 2-A



CC 75-11 (Crystallography and Liquid Crystals)
 IT 126769-43-5P 126769-44-6P 126769-45-7P 126769-46-8P
 126769-47-9P 126966-78-7P 126966-79-8P 126966-83-4P
 131256-92-3P 131356-36-0P 131356-37-1P **131356-38-2P**
 131356-39-3P 131356-40-6P 131356-41-7P 131356-43-9P
 131383-05-6P 131383-06-7P 131383-07-8P 131433-83-5P
 131433-84-6P 131433-85-7P 131433-86-8P 131433-87-9P
131433-88-0P 131484-82-7P

(liquid crystal, preparation and transition temps. of)

L44 ANSWER 41 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1991:6001 HCAPLUS
 DOCUMENT NUMBER: 114:6001
 TITLE: Diazo-coupling with a resorcinol-based cyclophane.
 A new water-soluble host with a deep cleft
 AUTHOR(S): Manabe, Osamu; Asakura, Kazumichi; Nishi,
 Tadahiko; Shinkai, Seiji
 CORPORATE SOURCE: Fac. Eng., Nagasaki Univ., Nagasaki, 852, Japan
 SOURCE: Chemistry Letters (1990), (7), 1219-22
 CODEN: CMLTAG; ISSN: 0366-7022
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 ED Entered STN: 12 Jan 1991
 GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

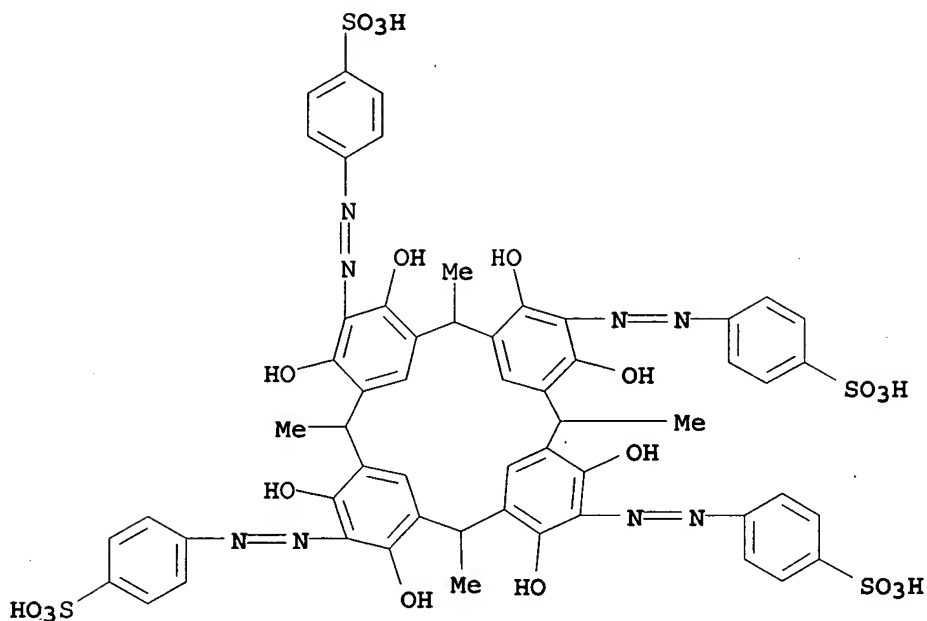
AB A new water-soluble host mol. I was synthesized by the diazo-coupling
 reaction of a resorcinol-based tetrameric cyclophane II and
 p-sulfonatobenzenediazonium. In aqueous systems the product included
 large guest mols. such as adamantane, pyrene, and coronene, with
 association consts. of 2.0-4.6 + 10⁴ M⁻¹.
 IT **130839-64-4P**
 (preparation and association constant of components of)
 RN 130839-64-4 HCAPLUS
 CN Benzenesulfonic acid, 4,4',4'',4'''-[(4,6,10,12,16,18,22,24-
 octahydroxy-2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]o
 ctacosa-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-
 5,11,17,23-tetrayl)tetrakis(azo)]tetrakis-, tetrasodium salt, compd.
 with tricyclo[3.3.1.13,7]decane (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 130839-63-3

CMF C56 H48 N8 O20 S4 . 4 Na

PAGE 1-A



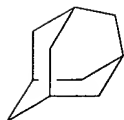
PAGE 2-A

● 4 Na

CM 2

CRN 281-23-2

CMF C10 H16



CC 25-29 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)

IT 130839-64-4P 130839-65-5P 130839-66-6P

(preparation and association constant of components of)

L44 ANSWER 42 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1990:138443 HCAPLUS

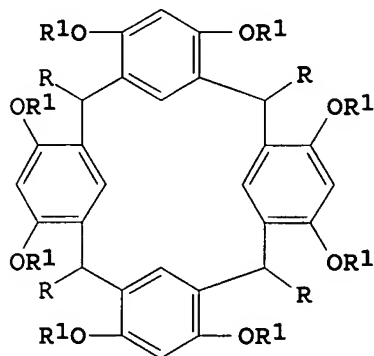
DOCUMENT NUMBER: 112:138443

TITLE: Characterization of high-molecular-weight
macrocycles by desorption chemical-ionization mass
spectrometry

AUTHOR(S): Guglielmetti, Gianfranco; Dalcanale, Enrico;

USHA SHRESTHA EIC 1700 REM 4B31

CORPORATE SOURCE: Bonsignore, Stefano; Vincenti, Marco
 SOURCE: Ist. Guido Donegani S.p.A., Novara, 28100, Italy
 Rapid Communications in Mass Spectrometry (1989), 3(4), 106-9
 CODEN: RCMSEF; ISSN: 0951-4198
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 ED Entered STN: 13 Apr 1990
 GI



AB A series of multiarmed macrocycles [I; R = (CH₂)_nMe; R₁ = (CH₂)_nMe, CO(CH₂)_nMe, COC₆H₄(CH₂)_nMe-p, COC₆H₄O(CH₂)_nMe-p] with mol. wts. up to 4400 Da was studied by desorption chemical ionization. Both neg.- and pos.-ion spectra exhibited excellent signal-to-noise ratio, despite the limited amount of material sampled (0.1-1 pmol). The mol. ions generally represent the base peaks of the spectra, but the extent of fragmentation increases as the source temperature is raised.

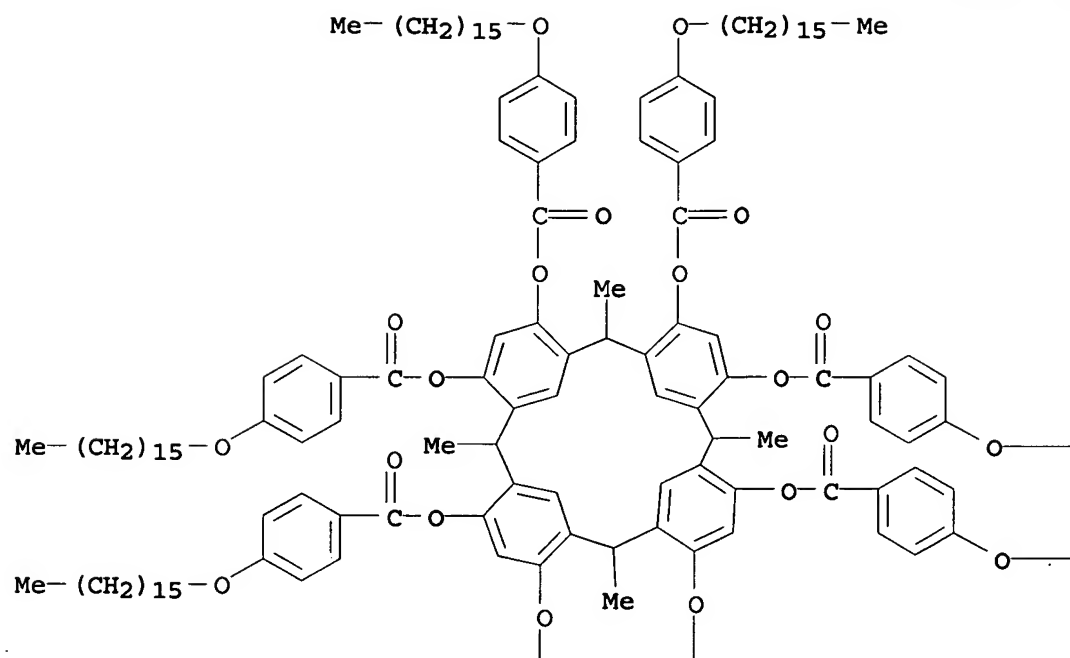
IT 121722-10-9

(neg.-ion desorption chemical-ionization mass spectrum of)

RN 121722-10-9 HCAPLUS

CN Benzoic acid, 4-(hexadecyloxy)-, 2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacos-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octayl ester, stereoisomer (9CI) (CA INDEX NAME)

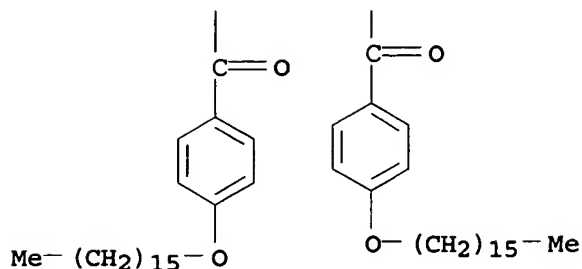
PAGE 1-A



PAGE 1-B

— (CH₂)₁₅— Me— (CH₂)₁₅— Me

PAGE 2-A



CC 22-8 (Physical Organic Chemistry)

Section cross-reference(s): 80

IT 121722-10-9 125691-68-1

(neg.-ion desorption chemical-ionization mass spectrum of)

L44 ANSWER 43 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1989:468077 HCAPLUS

DOCUMENT NUMBER: 111:68077

TITLE: Macrocyclic tetramers having columnar
tridimensional mesophasesINVENTOR(S): Dalcanale, Enrico; Bonsignore, Stefano; Du Vosel,
Annick

PATENT ASSIGNEE(S): Montedison S.p.A., Italy

SOURCE: Eur. Pat. Appl., 13 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

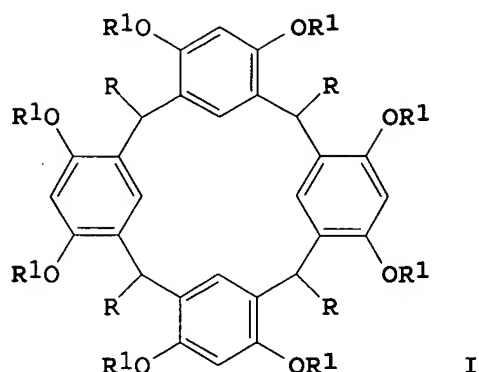
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 300800	A1	19890125	EP 1988-306722	19880721
EP 300800	B1	19911016		
R: CH, DE, FR, GB, IT, LI, NL				
US 4918217	A	19900417	US 1988-221609	19880720
CA 1289968	C	19911001	CA 1988-572566	19880720
JP 01104029	A	19890421	JP 1988-182748	19880721
JP 05029389	B	19930430		
PRIORITY APPLN. INFO.:			IT 1987-21370	A 19870721

OTHER SOURCE(S): MARPAT 111:68077

ED Entered STN: 20 Aug 1989

GI



AB The title macrocyclic tetramers, which form stable, columnar, tridimensional mesophases, have the formula I (R = C1-3 alkyl; R1 = C1-10 alkylcarbonyl, C1-11 alkoxy-p-benzoyl, or C1-11 alkyl-p-benzoyl). These compds. are useful in memory devices, nonlinear optical devices, and electrooptical display devices. Thus, 3,5,10,12,17,19,24,26-octadecanoyloxy-r-1,c-8,c-15,c-22-tetramethyl[14]metacyclophane, prepared by reacting the 3,5,10,12,17,19,24,26-octahydroxy derivative with palmitoyl chloride, showed a tridimensional columnar mesophase-isotropic phase transition.

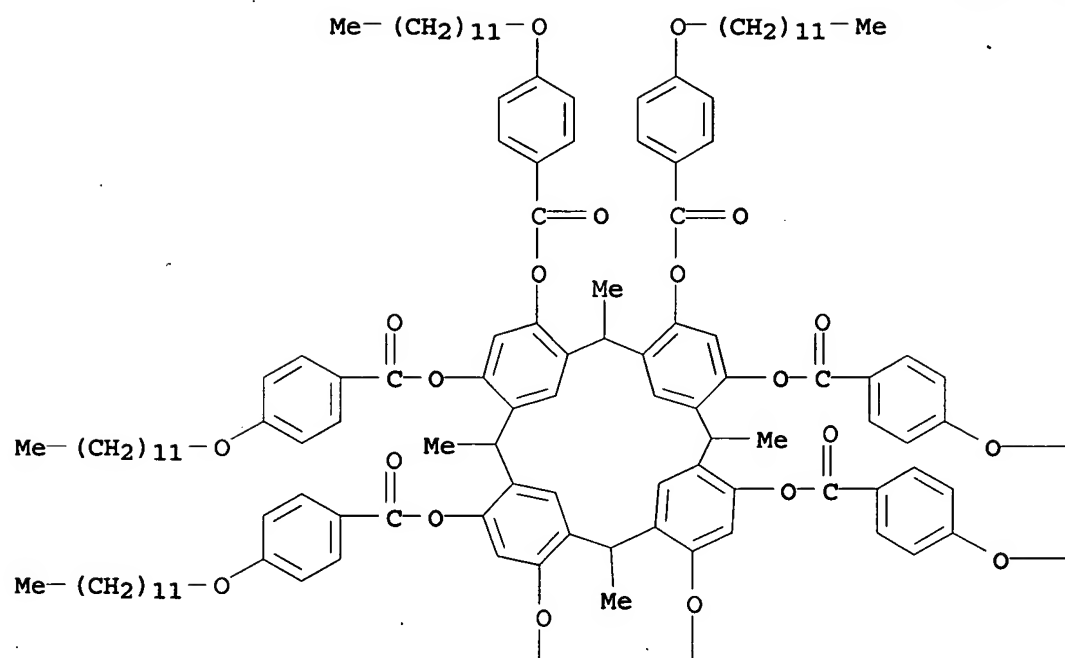
IT 121722-09-6P 121722-10-9P

(preparation of, having columnar tridimensional mesophase for electrooptical display applications)

RN 121722-09-6 HCAPLUS

CN Benzoic acid, 4-(dodecyloxy)-, 2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacos-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octayl ester, stereoisomer (9CI)
(CA INDEX NAME)

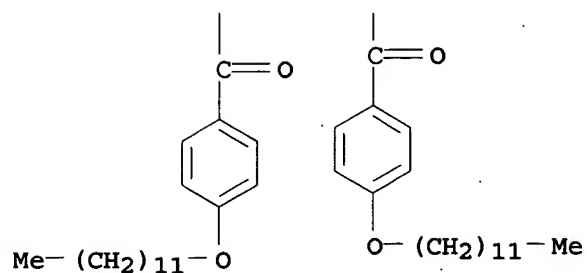
PAGE 1-A



PAGE 1-B

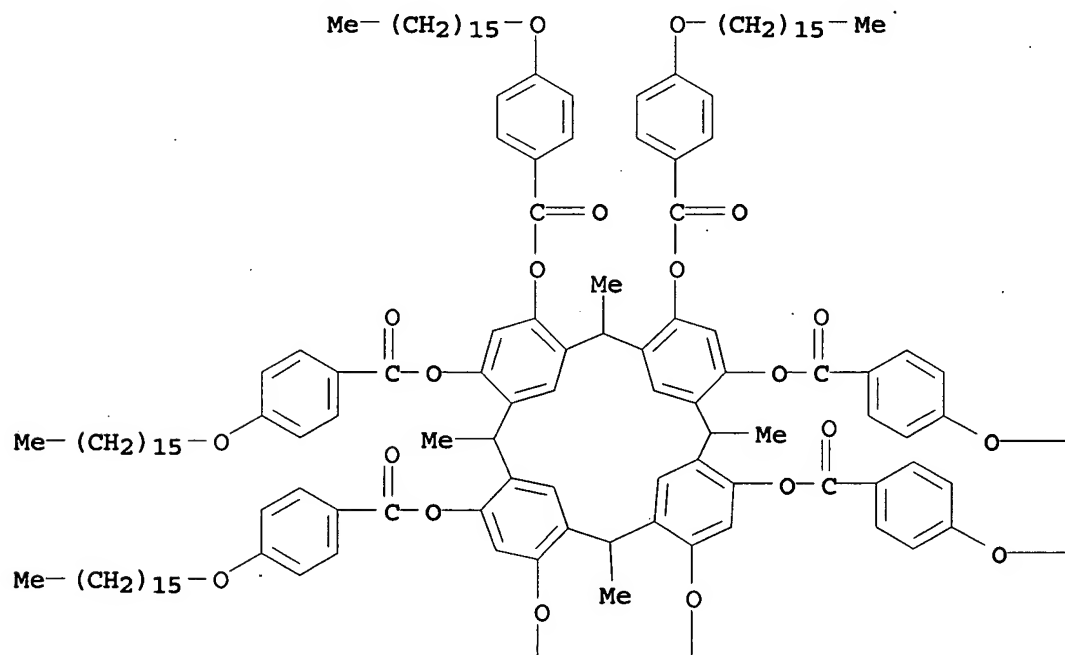
— (CH₂)₁₁—Me— (CH₂)₁₁—Me

PAGE 2-A



RN 121722-10-9 HCAPLUS
 CN Benzoic acid, 4-(hexadecyloxy)-, 2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacosan-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octayl ester, stereoisomer (9CI) (CA INDEX NAME)

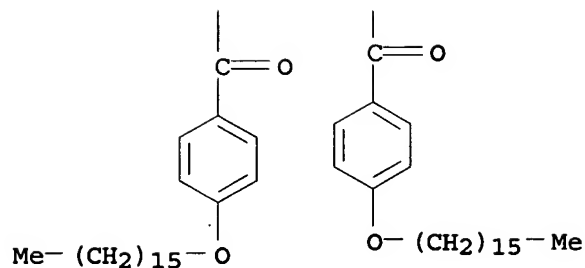
PAGE 1-A



PAGE 1-B

— (CH₂)₁₅—Me— (CH₂)₁₅—Me

PAGE 2-A



IC ICM C07C069-33
 ICS C07C069-92; G02F001-13
 CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other
 Reprographic Processes)
 Section cross-reference(s): 25, 75
 IT 121722-06-3P 121722-07-4P 121722-08-5P 121722-09-6P
 121722-10-9P 121740-93-0P
 (preparation of, having columnar tridimensional mesophase for
 electrooptical display applications)

L44 ANSWER 44 OF 44 HCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1978:189387 HCAPLUS
 DOCUMENT NUMBER: 88:189387
 ORIGINAL REFERENCE NO.: 88:29777a,29780a
 TITLE: Octopus molecules in the cyclotrimeratrylene
 series
 AUTHOR(S): Hyatt, John A.
 CORPORATE SOURCE: USA
 SOURCE: Journal of Organic Chemistry (1978),
 43(9), 1808-11
 CODEN: JOCEAH; ISSN: 0022-3263

DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 88:189387
 ED Entered STN: 12 May 1984
 GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Cyclotrimeratrylene (I) was converted into a series of oligo(ethylene glycol) ether derivs. II (n = 1-4; R = Me, Et, Bu) (octopus mols.) capable of adopting cavity-containing conformations and having complexing properties typical of crown ethers. Analogous derivs. of macrocycle III do not show crown-ether behavior because of lack of conformational rigidity. The length of polyether arms is of less importance than the stereochem. and conformational rigidity of the framework to which they are attached.

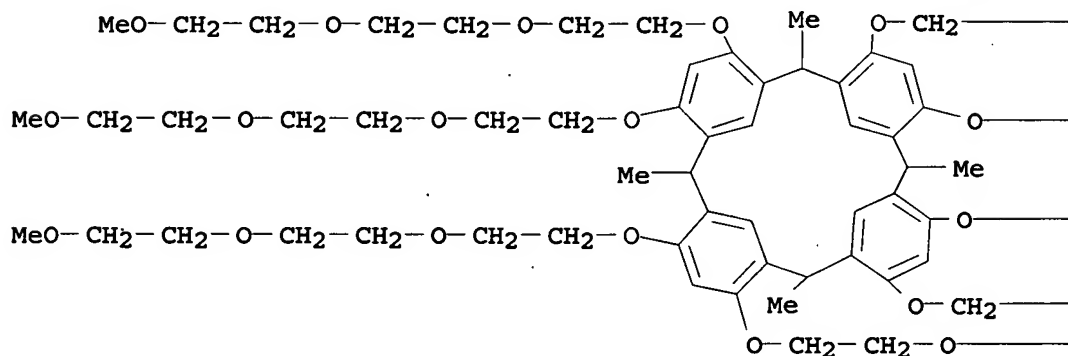
IT 65339-01-7

(formation of octopus mol. from)

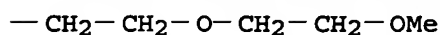
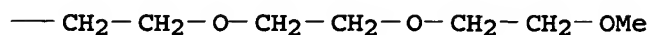
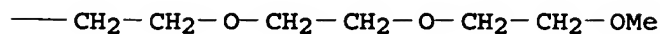
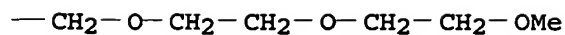
RN 65339-01-7 HCAPLUS

CN Pentacyclo[19.3.1.13,7.19,13.115,19]octacosal-
 1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene,
 4,6,10,12,16,18,22,24-octakis[2-[2-(2-methoxyethoxy)ethoxy]ethoxy]-
 2,8,14,20-tetramethyl- (9CI) (CA INDEX NAME)

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PAGE 1-B

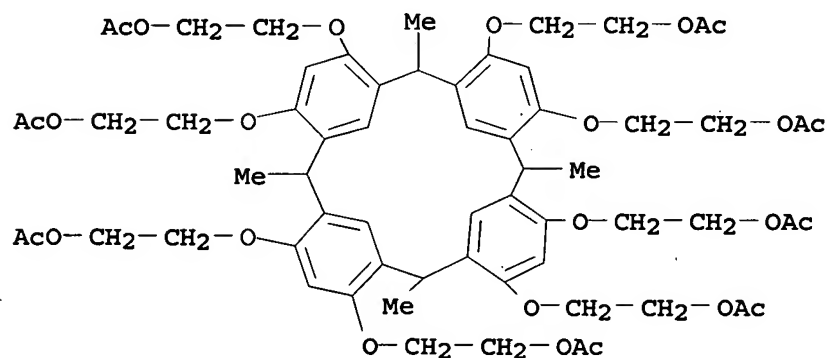


IT 65338-99-0P 65339-00-6P

(preparation of)

RN 65338-99-0 HCAPLUS

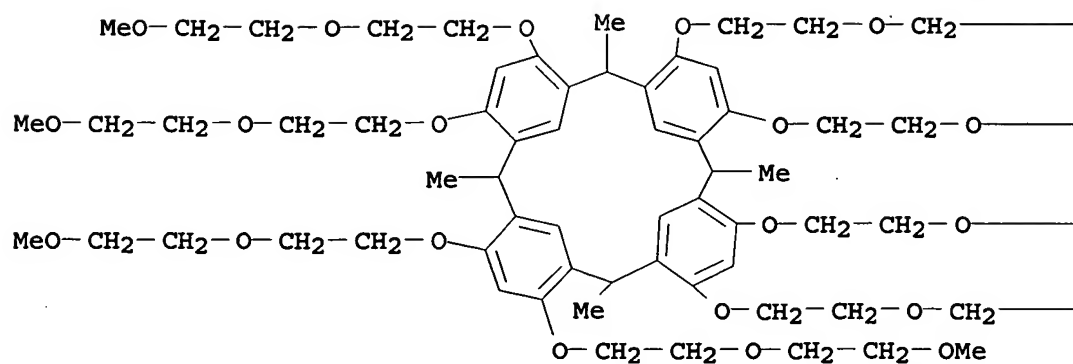
CN Ethanol, 2,2',2'',2''',2'''',2''''' ,2'''''' ,2''''''' - [(2,8,14,20-tetramethylpentacyclo[19.3.1.13,7.19,13.115,19]octacos-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-4,6,10,12,16,18,22,24-octayl)octakis(oxy)]octakis-, octaacetate (9CI)
(CA INDEX NAME)



RN 65339-00-6 HCAPLUS

CN Pentacyclo[19.3.1.13,7.19,13.115,19]octacos-
1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene,
4,6,10,12,16,18,22,24-octakis[2-(2-methoxyethoxy)ethoxy]-2,8,14,20-
tetramethyl- (9CI) (CA INDEX NAME)

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PAGE 1-B

— CH_2-OMe — $\text{CH}_2-\text{CH}_2-\text{OMe}$ — $\text{CH}_2-\text{CH}_2-\text{OMe}$ — CH_2-OMe

CC 22-1 (Physical Organic Chemistry)
 IT 65338-98-9 65339-01-7 65378-51-0
 (formation of octopus mol. from)
 IT 65338-99-0P 65339-00-6P
 (preparation of)

=> d his nofile

(FILE 'HOME' ENTERED AT 13:38:51 ON 03 DEC 2007)

FILE 'HCAPLUS' ENTERED AT 13:39:36 ON 03 DEC 2007

L1 1 SEA ABB=ON PLU=ON US20050271971/PN
SEL RN

FILE 'REGISTRY' ENTERED AT 13:39:49 ON 03 DEC 2007

L2 20 SEA ABB=ON PLU=ON (108-46-3/BI OR 110-87-2/BI OR
125748-07-4/BI OR 156281-11-7/BI OR 1927-95-3/BI OR
211427-64-4/BI OR 24424-99-5/BI OR 27955-94-8/BI OR
29654-55-5/BI OR 5001-18-3/BI OR 5292-43-3/BI OR 623-05-2/B
I OR 65338-98-9/BI OR 683227-72-7/BI OR 683227-73-8/BI OR
683227-74-9/BI OR 683227-75-0/BI OR 683227-76-1/BI OR
75-07-0/BI OR 99181-50-7/BI)

L3 1 SEA ABB=ON PLU=ON L2 AND C28H24O8/MF

L4 STR 125748-07-4

L5 39 SEA SSS SAM L4

L6 STR L4

L7 2 SEA SSS SAM L6

L8 15797 SEA ABB=ON PLU=ON 11417.1.2/RID

L9 907 SEA SSS FUL L4

L10 3 SEA ABB=ON PLU=ON L9 AND L2
SAV L9 LEE208B/A

L11 2 SEA SUB=L9 SSS SAM L6

L12 76 SEA SUB=L9 SSS FUL L6

L13 54 SEA ABB=ON PLU=ON L12 NOT 1-100/N

L14 4 SEA ABB=ON PLU=ON L2 AND TRICYCLO?

L15 114651 SEA ABB=ON PLU=ON 638.8.1/RID

L16 2 SEA ABB=ON PLU=ON L9 AND L15

L17 165 SEA ABB=ON PLU=ON L8 AND L15

L18 2 SEA ABB=ON PLU=ON L17 AND L9
SAV L12 LEE208C/A

L19 STR

L20 50 SEA SSS SAM L19

L21 630432 SEA ABB=ON PLU=ON 46.157.1/RID

L22 STR

L23 50 SEA SSS SAM L22

L24 525267 SEA ABB=ON PLU=ON 16.138.1/RID

L25 292 SEA ABB=ON PLU=ON L8 AND (L21 OR L24)

L26 5 SEA ABB=ON PLU=ON L25 AND L9

L27 1 SEA ABB=ON PLU=ON L26 AND L2

L28 2 SEA ABB=ON PLU=ON L17 AND TETRAMETHYLPENTACYCLO?

L29 617 SEA ABB=ON PLU=ON L8 AND TETRAMETHYLPENTACYCLO?

L30 289 SEA ABB=ON PLU=ON L29 NOT 1-100/N

FILE 'HCAPLUS' ENTERED AT 14:12:18 ON 03 DEC 2007

L31 51 SEA ABB=ON PLU=ON L13

L32 2 SEA ABB=ON PLU=ON L16

L33 2 SEA ABB=ON PLU=ON L18

L34 5 SEA ABB=ON PLU=ON L26

L35 2 SEA ABB=ON PLU=ON L28

L36 55 SEA ABB=ON PLU=ON (L31 OR L32 OR L33 OR L34 OR L35)

L37 1 SEA ABB=ON PLU=ON L36 AND L1

L38 44 SEA ABB=ON PLU=ON L36 AND (1840-2003)/PRY,AY,PY

L39 252 SEA ABB=ON PLU=ON L30

L40 37 SEA ABB=ON PLU=ON L39(L) PHOTO?

L41 27 SEA ABB=ON PLU=ON L40 AND ?RESIST?

L42	22	SEA	ABB=ON	PLU=ON	L41	AND	(1840-2003)/PRY,AY,PY
L43	9	SEA	ABB=ON	PLU=ON	L42	AND	L38
L44	44	SEA	ABB=ON	PLU=ON	L38	OR	L43